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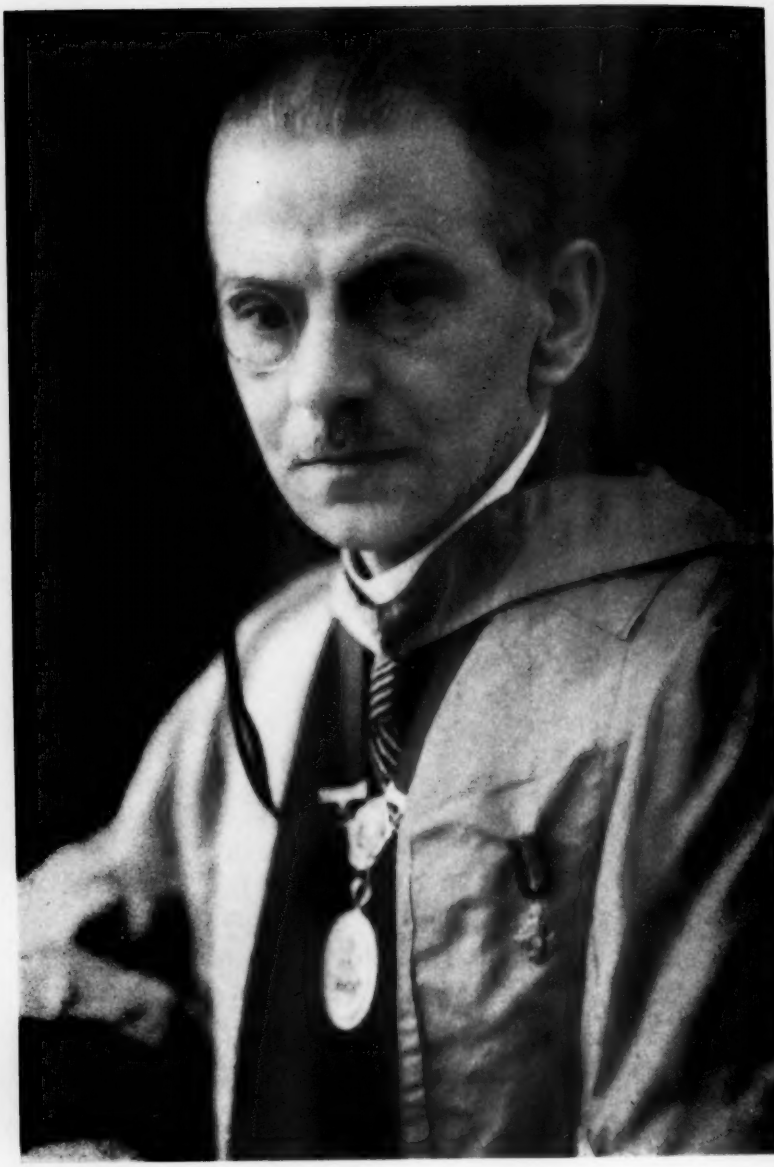

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AMERICAN JOURNAL OF PSYCHIATRY

PSYCHIATRY IN MEDICINE.*

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In an attempt to analyze the relationship of psychiatry to other branches of medicine, I have first reviewed the records of The Mayo Clinic for the years 1926 to 1930 inclusive. Because the figures from year to year have varied but little, I am taking a representative year, 1927, to give an idea of the general nature of the material reviewed. It included in all 938 psychiatric cases. In 467 of these the diagnosis was neurosis; in 169, affective disorder (manic-depressive psychosis); in 89, schizophrenia (dementia præcox); in 76, psychopathic personality (including paranoid states); in 49, mental deficiency; in 37, organic psychosis, and in 51 the diagnosis fell into a miscellaneous group.

Psychiatric cases appeared to represent about 1.5 per cent of the total annual registration. All of these patients were referred from the general clinical section to the section on neurology, where the psychiatric work is carried on. Thus psychiatric cases represent from 12 to 15 per cent of the entire work of the section on neurology.

As might be suspected immediately, this is not an accurate estimate of the total number of psychiatric cases (using the term in its broadest sense) seen at the clinic. It is impossible to give this figure accurately. It may be said, however, that about 10 per cent of all patients registered present problems in which the psychiatric element proved to be the outstanding factor. In addition there is a group of approximately 25 to 30 per cent who presented psychi-

*Read at the eighty-seventh annual meeting of The American Psychiatric Association, Toronto, Ontario, June 1 to 5, 1931.

atric conditions in addition to definite organic trouble. It is this latter group that makes up the greatest number of psychiatric problems with which the physician in general practice has to deal. The very nature and number of these cases preclude special psychiatric study, but the well-trained internist should be, and frequently is, able to treat them intelligently. This phase of psychiatry is in urgent need of development, since the great majority of these persons present adjustable problems that under the present scheme of things are usually neglected. These figures are even larger than those of Smith, who found that at least a fourth of all patients admitted to the Department of Medicine at the Henry Ford Hospital in Detroit have need of psychiatric study.

At The Mayo Clinic, approximately 3 to 5 per cent of all psychiatric patients are referred from the internist to the psychiatrist for special study. One of two conclusions seems justified: either too few patients are referred to the psychiatrist, or the internist is practicing more psychiatry than he is usually given credit for. At the clinic the latter is the case, for the internists have taken a keener interest in the great border-line group of patients, and their extensive experience with these patients qualifies them to treat them in an efficient manner. This is contrary to the usual practice; yet I am convinced that the cardiologist, the gastro-enterologist, or the urologist is as capable of recognizing and coping with mild functional conditions arising in his field as is the psychiatrist. It might be said that in an institution such as The Mayo Clinic, proportionately more functional problems are encountered than in private practice; but I believe it is safe to say that the difference is not striking and that it in no sense alters the fundamental problem.

The data in the opening paragraph of this paper are ample proof that when an unusual problem appears, the internist recognizes that advice and help are needed. The fact that the well trained general clinician is able to cope with the milder forms of psychoneurosis should be recognized. There may be a question in the minds of some that these patients should be classed with the psychiatric patients, but I believe that discussion of this problem is unnecessary. To see whether the assumption that the general clinician should treat psychoneurotic patients would stand the test of closer analysis, I reviewed the records of 500 consecutive patients who had not been at the clinic before, made up of 273 males and 227 females.

Although this is a relatively small group from which to draw conclusions, certain interesting facts were developed.

The material is placed in four groups: (1) 267 cases in which there was definite organic disease but no special psychiatric situations, 40 patients of this group having organic neurologic conditions; (2) 161 cases in which both organic and psychiatric conditions were present but the dominant condition was organic; (3) 59 cases in which the dominant condition was psychiatric, in 14 of which there was definite psychosis; (4) 13 cases in which either no diagnosis was made or else neither organic nor psychiatric conditions were present.

Groups 1 and 4 do not merit consideration here. The remaining 220, 44 per cent of the entire 500, presented psychiatric problems of varying degree. I believe it is at once apparent that all of these cases cannot receive extensive psychiatric study, and it might even be unwise for many of them to undergo special investigation; but certainly physicians who treat patients of these types must have a fundamental knowledge of psychiatry. In 161 cases of the 220 in which psychiatric problems were presented, the outstanding difficulty was of organic nature, whereas, in the remaining 59, the dominant situation was of a distinctly psychiatric character. One can hardly draw any sharp line between these two groups, but I believe that, as a rule, when there is a dominant organic complaint, the internist usually can meet the situation to advantage, and that only rarely does he require the help of a psychiatrist. The distinctly psychiatric conditions—by which I mean the different forms of psychosis, or the more profound forms of psychoneurosis—are usually recognized, and therefore rarely cause the internist any great concern. It is the large group of border-line cases, in which careful examination is required, that constitutes the real test of a young physician's diagnostic ability, for he is frequently misled by the more obvious organic complaints, and fails to appreciate that the situation is complex. It is these patients who wander about from physician to physician and only too frequently bear the scars of ill-advised operations.

To see if any added data could be gathered from arranging this group of 500 cases according to complaint and diagnosis from the psychiatric standpoint, table 1 was constructed.

TABLE 1.

CHIEF COMPLAINT AND DIAGNOSIS IN 500 CONSECUTIVE CASES.

Symptoms, or regions of which patients complained.	Cases.	Condition.		
		Organic.	Psychiatric.	Organic and psychiatric.
Stomach	94	60	11	23
Nervous disorder	49	14	12	23
Cardiac (thoracic)	43	25	4	13
Eye, ear, nose, throat	48	23	5	19
Genito-urinary system	39	23	2	15
Organic neurologic disorder	29	21	2	6
Pain (miscellaneous)	28	15	3	10
Headache	26	10	5	11
Female complaint	24	15	2	7
Rectal condition	17	11	1	4
Pain (back)	15	8	1	6
General weakness	16	9	2	5
Rheumatism	14	8	1	5
Mental disorder	7	4	3	...
Miscellaneous *	51	19	5	14
Total	500	267	59	161

* No complaint in 13 cases.

If one patient made several complaints, an effort was made to classify him according to what appeared to be the dominant complaint. It was noted that in cases in which the condition seemed to be purely organic, little, if any, special inquiry was made into the personality of the patient. Richards, who recently reviewed a large group of general hospital records, noted that physical facts were always emphasized, but that obvious mental facts were rarely mentioned. From the standpoint of the complaint only, it would have been impossible to draw any positive conclusions as to the functional or organic nature of the condition. If the complaint refers to one organ only and has been of relatively short duration, the probability is that the disease will prove to be organic. If many complaints are made, or if the condition has been of long standing, it becomes increasingly likely that a functional disturbance will be found to be present.

Complaints referable to the gastro-intestinal tract appear to be most common in the series of patients under consideration. This incidence may be due to the fact that many patients are referred to

the clinic because of carcinoma of the stomach, and require surgical treatment. Under the heading of nervous complaint I have included only those cases in which the major complaint was distinctly of a functional character. If there was a complaint referable to an organ or part, I grouped the case under that heading which best expressed the major condition. It also appears, from this analysis, that the physician must always be on the alert for organic disease. After all, of the 500 patients, 85 per cent had some definite organic disease, and this very frequently was the primary factor in the illness rather than an associated factor.

To determine exactly how reliable complaints are in diagnosis, I regrouped the cases as shown in Table 2.

TABLE 2.

FIVE HUNDRED CONSECUTIVE CASES GROUPED ACCORDING TO DIAGNOSIS AND COMPLAINT.

Classification of final diagnosis.	Cases.	Nature of disorder as first inferred from patient's complaint.	
		Organic.	Psychiatric.
Organic condition	267	198	69
Organic and psychiatric condition	161	85	76
Psychiatric condition	59	19	40
Total	487 *	302	185

* No diagnosis in 13 cases.

A classification of this type is somewhat arbitrary, for it is impossible to determine what constitutes a complaint of organic disturbance and what constitutes a complaint of functional disturbance.

The complaints alone are of assistance in diagnosis both of organic and of definitely functional disease, but 30 per cent of the cases would remain undiagnosed without careful study. It is in this group of 30 per cent, as mentioned, that not only the patient but often also the physician places the emphasis wrongly on obvious organic disease, failing to recognize the underlying functional difficulty, or that he does exactly the opposite, pouncing on neurosis, or even on psychosis, while some serious organic disease eludes him.

This study shows that one cannot make a hard and fast rule regarding the reliability of complaints. Many a history gives the impression that a condition is functional, and it may indeed be

functional in its major aspects, but it may prove on closer examination to have its origin in some specific organic disease, such as hyperthyroidism, ulcerative colitis, or tumor of the spinal cord. On the other hand, the mere fact that a patient has an organic disease does not mean that the organic disease constitutes the entire problem. To consider a patient neurotic because no adequate organic basis for his complaint can be found is an obvious mistake. A diagnosis of psychoneurotic or functional disturbance is no more a diagnosis of exclusion than is the diagnosis of a tumor of the spinal cord. It is certainly true, as Cabot has emphasized, that even a skillfully performed operation is not without harm, and that the time for psychiatric study is before, and not after, operation.

Some Problems Confronting Psychiatrists.

There is little doubt that psychiatry is advancing rapidly, but, as Wilbur recently said, " so far as insanity is concerned the public is largely still in the dark ages and the medical profession is in the twilight zone." This may seem to be a rather harsh statement but unfortunately there is considerable truth attached to this generalization.

The achievements of pyschiatry in the last thirty years are too well known to need mention before this gathering. Unfortunately the term " psychiatry " still carries with it a traditional stigma which has so permeated not only the minds of laymen but the minds of members of the medical profession, that it has been difficult to separate it from the past mysticism which surrounds anything dealing with the mind, or as White said, " to forget the early teaching that allied flesh and the devil for two thousand years."

With the marked trend in specialization, psychiatry has probably suffered more than any branch of medicine. It is, after all, the general practitioner who first comes in contact with the patient, and here lies one of psychiatry's big problems. The family physician, who knew the entire community, the family tree, the black sheep, and who was permitted occasional glances at closet skeletons and secrets, served, unknown to his flock, as a great balance wheel. He was in fact the " misery clinic " for the community. Today we have no such happy situation. The average physician or surgeon is now concerned with ulcers, thyroid glands, hearts, and not especially

with patients. As Jastrow said, "a doctor treats patients as well as diseases—a patient with a disorder—the two intricately and at times hopelessly entangled." The psychiatrist remains in a realm of his own; he is still looked on as the physician for the insane, and usually is called on by his medical colleagues only as a last resort. He rarely indeed sees patients during the early development of mild functional conditions, but usually only after unnecessary time has elapsed and much misdirected treatment has been given.

That the thoughtful physician is more and more realizing his duty to this large group of patients with functional disturbances, is shown by the writings of Conner, Willius, Wholey, and many others, who have taken up special psychiatric problems in relation to general medicine. Frank has wisely reminded us that the physician must know almost as much about the social order as the sociologist; he must know almost as much about the mind as the psychologist, and he must know as much about the subtle art of counseling as the priest. "And, finally, the great doctor must be able to distinguish between Hippocratic ethics and hypocritic etiquette in matters professional."

As a result of this intense specialization, neurology and psychiatry have been separated so that now there is a tendency to regard them as distinct fields of endeavor. There is no question that the diagnosis of a tumor of the spinal cord or of a tumor of the brain require an entirely different mental armamentarium from that required in treating psychiatric patients. It is, however, a common experience that a thoroughly conducted neurologic examination of a psychiatric patient not only aids in uncovering psychologic deficiencies, but often reveals definite organic bases for the mental symptoms, such as myxedema, pernicious anemia, or pellagra, to say nothing of encephalitis and syphilis. It is my opinion, therefore, that these two specialties should remain closely allied.

With this immense problem before the medical profession one may well believe the prediction which was made in the Hospital Number of the *Journal of the American Medical Association* in 1929: "If the present rate continues, and there is no apparent reason for thinking it will not, by 1934 we shall have more than one-half million persons in various nervous and mental institutions." While this is a momentous situation, especially from an economic and sociologic standpoint, it is one that is being cared for with

increasing intelligence and understanding. But when it comes to the great mass of psychoneurotic patients, or so-called border-line cases, much remains to be accomplished. The ideal situation would be to have a personality study made of every patient before any other investigation is carried out. This is impossible at present, but the time may come when every physician, as a result of his early training, will make a personality study of his patient before he starts out on some special line of treatment or assumes that his patient has nothing wrong with him.

The first and foremost reason for many of our problems is the lack of training in psychiatry that the average medical student possesses. The majority of students who are graduated from the upper third of their classes in Class A medical schools assume the attitude that they do not wish to be bothered with psychiatry, since they believe it has no practical clinical application. Such an attitude can hardly be attributed to mental inertia, but must have its source in the training and in the concept which has been given of what psychiatry truly represents.

Only 17 of the 64 medical schools which give a four-year course in the United States require of their students as much as a hundred hours of psychiatric study. These hours are frequently utilized in demonstration of typical ward cases, with little emphasis on the various forms of neurosis. Of the 561 hospitals for nervous and mental diseases in the United States, only 31 are affiliated with medical schools for teaching purposes. There is no question that the students who avail themselves of special training in psychiatry become most efficient, but what general physicians need is more intimate and general knowledge regarding the milder functional conditions that so rarely get to the psychiatrist. It would seem to me, after having had contact with young graduates for the last ten years, that psychiatry should be taught early in the medical course and should be taught at the bedside of medical and surgical cases even more than in the psychopathic ward. There is no question that if the teachers of medicine and surgery would emphasize the psychologic aspects of their various problems, the students would develop an entirely different attitude. I do not mean to say that no such effort is being made, for we all know the excellent work of Meyer, Barrett, and others. I believe that Ebaugh was correct when he stated that psychiatry should be combined more intimately with

the work of other departments. It would almost seem that the medical student should first be trained as a psychiatrist, and that then other work should be added to his curriculum. Alvarez' criticism that students are taught too much science and not enough art is well taken; and he wisely suggested that teachers of medicine should spend more time discussing functional problems, so that the student may develop a clearer and more practical concept of psychiatry in its relationship to medicine.

The problem is not one of trying to train more psychiatrists, but to train our medical students to realize that they are first of all dealing with complex human machines composed of more than a material body, and that something which we may call the personality is after all the most subtle part of the entire mechanism, and deserves our first and most thorough consideration. There can remain but little doubt that the entire field of psychiatry is demanding deeper consideration, and that its barriers must be entirely removed. Its isolated position must, with the shackles for insane patients, be relegated to the past.

Comment.

In spite of progress, psychiatry remains in an isolated position which cannot be corrected by training more psychiatrists. Medical students must be taught the fundamental facts concerning personality, in the early years of their training, so that they may have the opportunity to apply that knowledge under adequate supervision, learning to realize that it is something that applies to every patient and not to a few insane persons.

The great number of problems related to psychiatry that arise in the treatment of any large group of patients makes it impossible, or even unwise, to attempt detailed routine psychiatric study. What is needed is more profound training for the medical student, so that he can cope intelligently with this situation.

Neurology and psychiatry are closely allied, and although each type of work may be delegated to a special individual in a group, common interests should hold these specialties together rather than separate them.

If one appreciates that in 40 per cent of the average clinical material there is some psychiatric problem involved, it must be apparent how important it is to train students in this fundamental

branch of medicine. On the other hand, it must be kept in mind that about 85 per cent of psychiatric patients present some associated organic disease.

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DISCUSSION.

Dr. Bernard T. McGhie (Toronto, Ontario).—Of special interest to the Province of Ontario is the content of this very excellent paper, because of the fact that during the past year the provincial government has been attempting to take to the practicing physicians throughout the province what psychiatry has to offer in the diagnosis and treatment of the borderline case, or the recognition and treatment of the very early symptoms of mental disorders. And so important have we considered the cooperation of the family physician that every effort has been made to have all cases coming before our clinics either referred by the family physician direct or through the local medical officer of health. Should cases come to us from some other source, such as social agencies, where at all possible we report the case examined to

the family physician, either directly or through the medical officer of health. In this way the practicing profession throughout the rural parts of the province is quite prepared for such a consultant service.

It seems to me there are two ways in which those of us who are engaged in this work could obtain the cooperation of the family physician. One way is through the medium of our mental institutions, by seeing to it that the cases admitted are, after careful examination, reported to the family physician with information as to diagnosis, treatment and prognosis; and that further when the patient is convalescing and ready for discharge, his physician's cooperation is sought in the after-care. The other way is by referring to the family physician for treatment and follow up all cases that appear before our clinics.

This policy adopted during the past year has brought about certain results, as we had hoped. Many of the local medical societies or county medical societies throughout the province have invited the directors of the various mental health clinics to address them, not on the subject of the care of the full-blown psychotic, but on the recognition and care of just such cases as we have heard about in this paper.

For the next ten years the majority of the family physicians now in practice will continue to practice, and we must have their assistance as well as that of the medical student who is now in our schools or who will be entering those schools during the next few years. The success of our work along mental health lines lies in this mutual service—assistance rendered to the physician practicing in the community, and the invaluable cooperation which he can give.

Dr. K. J. Tillotson (Waverley, Mass.).—Any remarks I might make on Dr. Moersch's paper would be invidious, unless they were to compliment him on his excellent work, which presents the program to all of us who like to feel that we are on the advancing edge of psychiatry.

It has been my privilege, during the past year, to organize a psychiatric clinic at the Massachusetts General Out-Patient Department, staffed essentially by personnel from the McLean Hospital, together with several psychiatrists from Boston and vicinity.

There are several general hospital aspects of psychiatry which I think are important. First of all, it makes possible for a large group of people a psychiatric service which would not otherwise be given to them until some time later. That is the important thing—reaching these cases early.

The second point is the training of medical students in psychiatry in the general hospital. I think the medical student too often feels that psychiatry is an isolated subject which cannot be brought into the general hospital régime. At the Massachusetts General Hospital we take students on ward rounds and teach them psychiatric mechanisms in relationship to their investigation of general physical diseases. It is encouraging also to note the increasing interest that is being taken by house officers, by the general hospital men, and the excellent cooperation which they have given us at all times.

I think, therefore, that one of the distinct advances that psychiatry is making or has made is its entrance into the general hospital, thereby facilitating the early recognition of the psychoneurotic groups and even frank psychosis, and rendering to them the special service which is its province.

Dr. Charles F. Read (Elgin, Ill.).—Just a few remarks in connection with the situation that has arisen in the State of Illinois, in the past few months, relative to the training of nurses.

In Illinois, as in many other states and perhaps all the states, we have training schools for nurses in the state hospitals.

In the last year or two there has been a movement to do away with these schools, in favor of the training of affiliate groups of nurses from the training schools of general hospitals, the contention being that there is not enough medical and surgical material, teaching resources and facilities for the training of pupil nurses in state hospitals, even when supplemented by an affiliate course of a year in some general hospital.

The speaker's remarks and the percentages quoted concerning the number of patients coming to a great general clinic who present psychiatric involvements, either pure or in connection with organic disturbances, certainly bring up the question as to whether or not the pupils in the hospitals for general nursing training should not be required to take a certain amount of psychiatric nursing. Undoubtedly the number of patients with such psychiatric disturbances equals the number of pediatric cases or obstetric cases or orthopedic cases that these nurses trained in general hospitals will be called upon to nurse.

We have recently countered the objection raised by the nursing educators with the statement that if they will see to it that psychiatric nursing shall become a required part of the curriculum for nursing in the general hospital, that a certain amount of field training is given in hospitals for the insane or psychopathic hospitals, then we shall be very pleased to give up our nurses' training schools and depend upon the affiliate pupils that will be sent to us for training in this special line.

Dr. C. P. McCord (Albany, N. Y.).—While the World War demonstrated a large group of psychiatric cases, and it seemed that some change ought to take place in medical education after that, a survey that I made five years after the war, of ten leading medical schools, revealed the fact that specialties like obstetrics or the eye or the ear were receiving a greater number of hours than was psychiatry, and in some instances organic neurology was receiving four times as many hours as psychiatry. So there was not much appreciation of the need for the education of the medical student in this subject.

And we have to reckon with the fact that there are many physicians who deal with these so-called *minor* mental disorders by advising two weeks at Atlantic City or a sea voyage, or something of that sort.

So I think we ought to make note of one statement in the very excellent paper that was read, and not fall into the error of believing that the internist approaches his cases that have psychiatric aspects with the same degree of open-mindedness that the psychiatrist has when he approaches cases that present possible organic conditions. I sometimes think that if we referred as few suitable cases to the internist as the internist does to us, the psychiatrist would be doing blood sugars and Wassermanns and a great variety of the technic which instead he is perfectly willing to leave to the internist.

I know an internist who announced some time ago, in opening a mental clinic in connection with a hospital the policy of which he dictated, that there were many, many *minor* mental disorders that were *quickly* and *easily* cured if patients would only come to the clinic. I don't think we want to fall into any such error. I do not know of any *minor* mental disorders that are quickly and easily cured. I think when we are speaking in such terms, we are speaking of *symptoms,* and symptoms which often indicate rather deep-seated neurosis, and if we said to the internist that he was treating headache symptomatically, I think he would resent that in about the same way that the psychiatrist should resent the insinuation that minor mental disorders are quickly and easily cured, or their fundamental genetic elements perhaps even understood by the approach available in the field of internal medicine.

DR. MOERSCH.—There is just one thought that I wish to emphasize, and that is this: I think a good deal of the progress of psychiatry is really going to depend upon the general practitioner. In Minnesota we have been trying for about fifteen years to get a psychopathic hospital, and each year the legislature, by some hook or crook, finds an excuse for not granting it. I am quite convinced that if the medical men throughout the state would get together and really work, it would not be long before we would have such an institution.

THE INFLUENCE OF RELIGIOUS IDEAS ON THE ETIOLOGY, SYMPTOMATOLOGY AND PROGNOSIS OF THE PSYCHOSES.

With Special Reference to Social Factors.*

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Our starting point in this study was the idea that "conflict" induced by combined social and religious isolation, of one sort or another, was a fruitful cause of psychiatric distress; and at the same time one that was capable of resolution by some conscious or subconscious psychological mechanism (hence of favorable prognostic omen). This idea has frequently been expressed by Dr. Strecker[1] and others, with special reference to Russian Jewish immigrants or members of certain "Pennsylvania Dutch" sects. Later we extended our field to include all types of religious ideas observed in a group of 500 consecutive cases admitted to a mental hospital. We sought to separate those religious expressions which were merely symptomatic of delusional or emotional disturbance from those influences and manifestations which conceivably helped to initiate or aggravate the psychosis.

Our findings are interesting from this wider point of view, though we were unable, as we had hoped, to get any valid statistical data as to prognosis in special racial and religious groups. As a background for our study we took the experience of the same

* Read at the eighty-seventh annual meeting of The American Psychiatric Association, held in Toronto, June 2-5, 1931.

From the Laboratory of the Institute and the Clinics for Mental and Nervous Diseases, Pennsylvania Hospital, Philadelphia, Pennsylvania.

[1] Strecker, Edward A., *et al.*: Prognosis in Manic-Depressive Psychosis. Section xxvi, p. 475, Proc., Assoc. for Research in Nerv. and Mental Disease, vol. XI (1930), Williams & Wilkins Co., Baltimore, 1931.

hospital, in its earlier days as a separate department, as well as the attitude of psychiatrists of the period beginning with 1840. At that time physicians laid stress on the "supposed" causes of mental upset. Among these were religious excitement and perplexity.[2] These were recorded by Dr. Kirkbride as "causes" in over 7 per cent of his first five hundred (572) admissions. It appears that religious excitement was much more operative then than now, due largely to a popular tendency of the time to exaggerated emotional religious expression as manifested by the revivals in Ulster in 1859[3] as compared with the indifference or perplexity of the present day. However the study of a series of individual histories from the case book of the Pennsylvania Hospital, recorded in 1841, indicates no qualitative difference in the patients' actual productions. We had anticipated at least a richer religious content. A few examples, in abbreviated form, will suffice.

Case 64, a girl of 16, "very delicate and frail, unwilling to eat the smallest quantity. Believes it her duty to pray and read her Bible at all times and in every situation." This causes her to neglect her work but "she has no choice." She subsequently died of pulmonary tuberculosis.

Case 87, a woman of 32, whose attack was attributed to the death of her parents and to religious excitement, was "melancholy in the highest degree. She declares she is lost beyond all redemption, passes her time walking and wringing her hands and crying. She had also a most determined propensity to commit suicide." She recovered completely. Other cases showed: religious delusions, religious erotic reactions, catatonic prayer-like attitudes, etc.

Ray[4] in 1863 described a more distinctive instance of psychosis due to religious excitement as then understood. "A worthy couple," previously normal in conduct and religious observance imitated friends and went to revival meetings. "They immediately became absorbed in the subjects presented to their attention, to the exclusion of every other consideration. On the third or fourth day it was obvious they were losing their reason, and within a week

[2] Table I, Appendix I.

[3] "Religious Revivals in Ireland." Amer. Journal of Insanity, XVI, 356-357, 1859-60; *ibid.*, XVII, 460, 1861-62.

[4] Ray, I: Mental Hygiene, Boston, 1863.

from the time when they began to attend the meetings, they were both raving maniacs, and such they died, one in the course of a few days, the other in the fourth week." Such cases seem to have been rarer than contemporary statistics under the caption "religious excitement" would indicate.

From a descriptive standpoint it is hardly possible to improve upon the systematic accounts given by the leading psychiatrists of that day. They are mainly deficient because of an "a priori" attitude in religious matters and a lack of scientific background, aggravated by the deficiencies of the ante-Kraeplinian nosology. Years later (in 1887) Hurd[5] classified this accumulated experience in a paper on religious delusions. His classification[6] is as follows:

RELIGIOUS DELUSIONS.

I. Accompany the mental development of over-stimulated and injudiciously educated children.
II. Characterize the insanity of pubescence.
III. Are caused by self-abuse.
IV. Are associated with paranoia.
V. Are associated with epilepsy, dementia and general paralysis.
VI. Are observed in melancholia and climacteric insanity.
VII. Arise in chronic mania, or toxic insanity.

Between their generation and our own, a barrier is fixed, due to the immense progress which has taken place in all the natural sciences, and particularly to our altered views of man and the universe, brought about by the theory of evolution. To the field which we are considering, ethnology and dynamic psychology have particularly contributed. An appreciation of the various psychological mechanisms, largely due to Freud and his contemporaries, has lead to a better understanding of personality and of religious ideas. We do not need to accept the extreme implications of the Freudian doctrine as to God and religion,[7] but may make profitable use of

[5] Hurd, H. M.: American Journal of Insanity, XLIV, 1887-1888 (pp. 471-487).

[6] Condensed by Tuke, Dict. of Psychological Medicine, Vol. II, p. 1091, Lond., 1892.

[7] Schroeder, T.: Psycho-Analytic Rev., 16: 361-376, October, 1929.
Reik, T.: International J. Psycho-Analysis, 10: 292-302, 1929.
Seng, H.: Nervenarzt, 2: 393-399, July 15, 1929.
Grensted, L. W.: Spectator, 259, February 21, 1931.

many of its concepts. Although we have not labored the point, in fact have analyzed our material on the descriptive level, nevertheless it is easy to see, in the cases we shall cite, excellent examples of phantasy, conflict, rationalization, projection, identification and even of sublimation.[8]

Our main group consisted of 342 females and 158 males.[9] Fifty per cent of these were cases of affective psychoses; 17 per cent were schizoid and paranoid types; 8 per cent were neuroses; the remaining 25 per cent were made up from the organic and miscellaneous group.[10] Of these 500 cases, 68 (in round numbers 14 per cent) were found with definite religious content; in addition a few others used an occasional religious phrase. We divided these cases (from the point of view of religious content) into three groups.[11] in the first group (I) were those in which definitely religious factors seemed to be predisposing or exciting causes. In three of these cases there were excessive religious interests; in nine cases there was conflict between religious and sex ideas. This group constituted nearly 2½ per cent of the total number and is the only one which can in any strict sense be compared with the religious excitement, preoccupation, or perplexity of older writers.

The second group (II) exhibited conflict about the moral and social aspects of religion: on the one hand prejudice, intolerance, social ostracism and persecution, and on the other, more specifically, regulations as to marriage, education of children, divorce, diversion, costume and diet. In ten of these cases conflict was mainly personal; in three mainly marital; in ten it involved the family or wider social groups. This group constituted nearly 4 per cent of the total material, while groups I and II together (including all cases in which "religion" appeared to play an important part in the genesis of the psychosis) amounted to 7 per cent. From these figures, which match those of the less critical records in the "forties," it would almost seem as if the peace that we have gained by spiritual indifference had been replaced by social and religious conflict on a lower plane!

[8] Schroeder, T.: Psycho-Analytic Rev., 16: 46-54, 1929.
[9] Table II, Appendix I.
[10] Table III, Appendix I.
[11] Table IV, Appendix I.

The third group (III), almost equal in number to the other two (nearly 7 per cent of the total material), consisted of manifestations plainly symptomatic: ideas of sin, self accusation, etc., 11 cases; euphoric and hyperactive manifestations, 11 cases; delusional, hallucinatory and paranoid ideas, six cases; postural and catatonic expressions, five cases. Most of these manifestations are so familiar that it is unnecessary to cite examples. One toxic hallucinatory case is of special interest as it closely simulates our group I. We consider the strong religious coloring in this case as probably normal. However, mixed cases are common in all groups; in these any classification is more or less arbitrary.

The case histories which follow have been edited and condensed from the hospital records. They illustrate our classification. Other cases are given in the appendix [12] in abbreviated form. If we had wished to go outside our particular series we could easily have found more striking examples of the types we have mentioned, as well as of more unusual forms of religious behavior.

Group I (a). The first case is an example of excessive religious interest though sexual conflict is also suggested. The "exciting cause" is recorded as "religion," although there were many other contributing causes. Her excessive zeal might indeed be considered as expressive of her cyclothymic temperament.

CASE 10971.—A woman, 48, of New England ancestry, Episcopalian. As a young woman was sociable and gay, high strung and impulsive. Had a love affair, but the young man could not marry her because he was going to study for the priesthood—however he continued to visit her. About this time she developed an intense interest in church work, which has continued. This may be interpreted as "sublimation." She studied and taught kindergarten, and subsequently occupational work; taught the latter in the army, then in hospital and finally in church missions. Her interest in the church became progressively more intense and engrossing. In the meantime she was, for six years, under supervision for tuberculosis. In 1928, in spite of disapproval of friends and family, she entered a convent (Episcopal) as a novice. A year later, coincident with irregular menstruation, she developed a depression with ideas of sin, unworthiness and self-accusation. She made desperate suicidal attempts both before and after her admission to hospital in 1929. She was retarded, had depressing delusions of jail, was frequently agitated; but after a year, gradually made a good recovery. She has not returned to the Sisterhood and apparently takes her religion more sanely.

Diagnosis.—Involutional melancholia.

[12] Appendix II.

The second case, belonging to Group II, was one in which a subconscious religious conflict was only revealed in the psychotic productions. In this and other cases of the group spiritual conflict was not conspicuous or important.

CASE 11240.—A married woman of 29. Her father is a Protestant, her mother a Catholic, and her husband a Protestant. The patient was never religious though brought up in her mother's faith, and on marriage joined her husband's church. Has never appeared to be disturbed by her change of religion. In 1930 developed a psychosis accompanied by evidences of somatic and endocrine dysfunction and characterized by depression, apprehension, hallucinations, delusions, ideas of reference, posturing. Her talk was irrelecant and circumstantial. She made a very significant remark after she had been in the hospital a few days. She kept stopping the other patients and asking them who they were. When told, she said, "Oh, no you're not, you're only fooling yourself, you aren't doing right, that's why you deny your real name. You know you are all Catholics. Why have you changed your name and religion?" This was evidently a "projection" of her own conflict.

Her most important delusion is that she has supernatural power. She says she is God's mother, her husband is God's father and her son God. She gets messages from her friends who are dead; they are buried but are alive through her. One morning she was found lying on her back on the floor. She explained this by saying that she was "Christ on the cross."

Diagnosis.—Undiagnosed psychosis, probably schizophrenia.

In the following case (also of Group II) religious persecution enters as a factor.

CASE 10965.—A Russian Jewish woman, 26 years of age, married. Patient was born in Russia and came to this country at the age of eighteen. During the World War she witnessed the massacre of two of her brothers in a "pogrom" and was herself assaulted by a Cossack. During this period she lost her parents through illness. Soon after coming to this country she married; there has been considerable friction. She was of a quiet sensitive disposition with occasional emotional outbursts. For two years she has been somewhat depressed and has complained of severe headaches. Nine days before admission to hospital the patient received a letter from a maternal aunt in Russia which told of the dreadful suffering among the poorer class in Russia due to the cold weather. The aunt said they were tearing up the wooden grave markers in the cemetery to use for fire-wood and that they had taken away the wooden tablet that marked the place where her mother and brothers were buried. Patient was disturbed and depressed for three days and then developed a marked manic reaction (flight from reality). She said she was the happiest woman in the world and that her head no longer pained her. She begged her husband to call her mother (dead) on the telephone, and prayed almost constantly thanking God for making her so happy. She showed hyperproductivity with variability of mood, confusion, visual hal-

lucinations, illusions and lack of insight. Her words and actions had a religious coloring. After nine months she "snapped out" of her psychosis and was discharged much improved.

Diagnosis.—Manic-depressive, manic.

The following case already alluded to as simulating excessive religious interest belongs to Group III, *i. e.,* we consider the religious ideas as symptomatic or incidental.

CASE 11110.—A married woman 67 years of age. Following herpes zoster she developed a severe toxic reaction characterized by delirium and negativistic reactions. She had to be tube-fed and resisted any attempt to move her. Occasionally struck out blindly at persons near her and made a constant sputtering noise with her lips. After ten days delirium she suddenly improved but for a time was hallucinated at night. Her productions now had a highly religious trend. She believed that she was sent for "a higher purpose." The Lord wished her to pass through this ordeal so that she might be prepared to write "a testimonial to His glory forever. Amen." She remembered her actions and utterances during her delirium and gave them a religious interpretation as visions or revelations. One of her visions was induced by the pain of the herpes. "I dreamed the devil came to me and said, 'So! you're going to have the church are you—then take that!' and he gave me a most terrible dig in the side." (An idea no doubt suggested by the popular term "The Devil's Claw").

A review of her early life showed that it had been deeply religious and as she herself described it "devoted and consecrated to the Lord." Just prior to her illness she had been emotionally exalted in connection with farewell services given in honor of her son who was going to the foreign field as a medical missionary. In him she had realized the fulfillment of all her religious aspirations. It is quite natural that her mental picture should have taken on a strong religious coloring although it is clear that the psychosis in this case was of somatic origin.

Diagnosis.—Psychosis with somatic disease (herpes zoster).

Groups I and II together—35 cases in all—contained 21 instances of affective psychoses, and seven of schizoid. Hence affective states constituted 60 per cent of these two groups and only 50 per cent of the whole series (500). Group III showed a slightly greater proportion of affective psychoses, namely 70 per cent. From what follows we might have expected an even greater difference.[13]

From Dr. Strecker's prognostic group of 100 affective psycoses,[14] which consisted of 50 cases, equally divided between men and women, remaining well after a lapse of eight to ten years; and

[13] Table V, Appendix I.

[14] Tables VI and VII, Appendix I.

50 cases similarly divided, continuing without improvement after a similar lapse of time, the following statistics were derived.

In the *recovered* group there was a total of 15 cases with religious content or 30 per cent. In the corresponding group of *unrecovered* cases there was a total of 13 cases or 26 per cent. No relation between religious ideas and prognosis can be inferred from these figures. A more detailed analysis emphasizes the relatively great frequency of religious ideas in the purely affective psychoses (28 per cent for the whole group or twice our figures as given in Table IV). In fully 22 per cent these ideas were mainly or entirely symptomatic.

In the study of our own material we had noticed a seemingly greater incidence of depressing ideas of sin and unworthiness in the strongly individualistic Protestants than in the Catholics or Jews who accept their traditional group religions more as a matter of course. Subsequently we found that Hurd [5] had made the same observation. While we feel reasonably sure that this observation is a true one in a qualitative sense, we have been forced to abandon it in a quantitative one. A review of the religious affiliations of our patients [15] shows an almost exact parallelism between the proportion of Catholics, Jews, and Protestants in our whole group and the proportion of each category developing depressing religious manifestations. On the other hand there is a slight suggestion that social conflict is more frequent among Jews and Catholics than among Protestants. From a qualitative standpoint the symptomatic manifestations undoubtedly differ in these three groups due in part to the assumption of spiritual responsibility on the part of the husband or father in the case of the Jew, and of the Confessor in that of the Catholic.[16]

The writers do not ignore more important etiological factors than religious stress (of whatever type) but are nevertheless convinced that in at least 7 per cent of unselected mental cases, as represented by our material, religion is an important factor in the initiation of the psychosis. Conflicting spiritual values, as Haydon [17]

[5] Hurd, H. M.: *loco cit.*, p. 483-484.

[15] Tables VIII and IX, Appendix I.

[16] Frenay, A. D.: The Suicide Problem in the U. S. Boston, 1927; pp. 170-171. Alleged Potency of Confession *vs.* Suicide.

[17] Haydon, A. E.: "Spiritual Values and Mental Hygiene." Mental Hygiene, XIV; 779-790, 1930.

states in a recent article, increase the difficulty of achieving a unified personality amid the complexities of the modern world as compared with the simpler world of yesterday. Conflict of this type is probably more frequent in normal adolescents and in neurotic individuals than in cases who later become frankly psychotic. These groups (the prepsychotic, the neurotic and the adolescent), which can hardly be separated with certainty before the appearance of a definite psychosis or neurosis, afford an opportunity for mental hygiene on the part of the clergyman, the psychologist, the social worker or the physician, if and only if he (she) is able to approach personality problems from the point of view of dynamic psychology. An appeal to authority, dogma or emotion on the part of the clergyman or attention to physical factors alone on the part of the physician will likely prove futile. The danger, on the other hand, of non-medical enthusiasts neglecting or disdaining physical factors need not be stressed before a medical audience; the primary exclusion of such factors should be axiomatic.

Cases of Group II would largely disappear if religious toleration became universal and mutual understanding and forbearance unlimited; but meanwhile, with Utopia unrealized, they remain a problem, if a diminishing one, for all the agents we have mentioned and occasionlly for the lawyer in addition. We are, moreover, far from discounting the value of religious beliefs, customs and disciplines as a reasonably satisfactory solution of moral and social difficulties for the vast majority of persons. It is only the exceptional case that imperatively requires individual rather than mass methods.

APPENDIX I.

Tables.

TABLE I.

Supposed Causes of Insanity.

Compiled from Reports of American Hospitals for 1848.

Hospital	Cause ascertained.	Religious excitement.	Per cent.
Albany	1054	155	14.7
Worcester	431	46	10.6
Ohio State	220	21	9.5
Williamsburg	88	8	9.0
West Virginia	231	18	8.0
Pennsylvania Hospital	*572	42	7.3
Hartford Retreat	87	6	7.0
Bloomingdale	85	4	4.7
New Hampshire	89	4	4.5
Friends Asylum	87	3	3.4
Boston	34	1	3.0
Mt. Hope	160	1	0.8

No reports: Georgia, Indiana, Maine, Vermont, Massachusetts General.

* Five years.
Ibid., 42-year period (1840-1842) 5307 243 4.6
Other reports are for variable periods.

TABLE II.

General Statistics of 500 Cases.

Females admitted in 1929 (excluding 3 children admitted to Franklin School)	172	
Females admitted in 1930 (excluding 5 readmissions from previous group)	130	
Females admitted in 1931 to date (2 readmissions excluded)	40	
		342
Males admitted in 1930 (excluding 5 children admitted to Franklin School and 5 readmissions)	127	
Males admitted in 1931 to date (excluding 5 readmissions)	31	
		158
Total		500

TABLE III.

DIAGNOSTIC GROUPING OF 500 CASES (IN ROUND NUMBERS).

	Percentage.	Relative proportions.
Affective psychoses	50	6
Schizoid and paranoid	17	2
Neuroses	8	1
Organic group:		
Paresis.		
Senile dementia.		
Psychosis with somatic disease.		
Organic, toxic	17	2
Miscellaneous group:		
Alcoholic, with and without psychosis.		
Mental deficiency, with and without psychosis.		
No psychosis	8	1
	100	12

TABLE IV.

CLASSIFICATION OF RELIGIOUS IDEAS.

	Cases.	
I. Religious factors predisposing or exciting:		
a. Excessive religious interests	3	
b. Conflict between religious and sex ideas	9	
	12	2.4%
II. Socio-religious factors:		
a. Conflict, personal	10	
b. Conflict, marital	3	
c. Conflict, familial	6	
d. Conflict, social	4	
	23	4.6%
III. Symptomatic religious ideas, etc.:		
a. Ideas of sin, self accusation, etc	11	
b. Euphoric with hyperactivity	11	
c. Hallucinatory and paranoid	6	
d. Postural and catatonic cases	5	
	33	6.6%
Total	68	13.6%

* I and II combined 35 (7 per cent).

TABLE V.

DIAGNOSTIC CLASSIFICATION ACCORDING TO "RELIGIOUS" GROUPS.

GROUP I.

Manic-depressive psychosis	7	58%
Schizophrenia	3	
Other	2	
Total	12	

GROUP II.

Manic depressive psychosis	14	65%
Schizophrenia	4	
Other	5	
Total	23	

GROUP III.

Manic-depressive psychosis	23	70%
Schizophrenia	5	
Other	5	
Total	33	

Undiagnosed cases are classified according to preferred diagnosis.

TABLE VI.

PURE AFFECTIVE CASES (STRECKER).

50 RECOVERED CASES.

"Religious" groups	Men.	Women.	Total.	
I	0	1	1	
II	0	1	1	
III	5	8	13	
	5	10	15	(30%)

50 UNRECOVERED CASES.

I	2	0	2	
II	0	2	2	
III	4	5	9	
	6	7	13	(26%)

TABLE VII.

COMPOSITION OF DR. STRECKER'S GROUP.

	Male.	Female.
Manic-depressive	45	42
Involutional	5	8

TABLE VIII.

DISTRIBUTION OF CASES ACCORDING TO RELIGIOUS AFFILIATION.

GROUP I.

Roman Catholics	6
Protestants (4 sects)	6
	12

One case recorded as due to "religious excitement."

GROUP II.

Roman Catholics	5
Protestants (8 sects)	10
Hebrews	8
	23

GROUP III.

Roman Catholics	7
Protestants (9 sects)	19
Hebrews	7
	33

One case "due to religion."

TABLE IX.

RELIGIOUS AFFILIATIONS OF 500 CASES.

	Roman Catholics.	Hebrews.	Protestants.	Total.
Men	31 (20%)	32 (20%)	95 * (60%)	158
Women	63 (18%)	73 (21%)	206 † (60%)	342
	94 (19%)	105 (21%)	301 ‡ (60%)	500

* Four larger sects equal 80, 10 smaller (including "Protestants," "unspecified" and "none" as one sect) equal 15.
† Four larger sects equal 144, 23 smaller sects equal 62.
‡ Four larger sects equal 224, 25 smaller sects equal 77.
Four larger sects were Presbyterian, Episcopalian, Methodist and Lutheran.

APPENDIX II.

1. Summary of 68 cases chosen from 500 consecutive, unselected admissions because of religious content (pp. 25-34).

2. Note concerning 28 cases chosen from a list of 100 affective psychoses (Strecker) (p. 35).

GROUP OF CASES (68) WITH RELIGIOUS CONTENT—CLASSIFIED.

GROUP I.

I (a) Cases illustrative of excessive religious interests.

CASE 10971.—(See summary in body of the paper.)

CASE 11130, female, 34, Church of the Brethren. Diagnosis: manic-depressive psychosis, mixed. The patient was brought up in a strongly religious environment to be a missionary, not enthusiastic. She also studied nursing. In the mission field was considered a very efficient worker, but broke down. There had been a conflict between her own sense of inadequacy and lack of inclination for the work and the unconscious pressure of the family and the religious denomination. In her psychosis there were pronounced mood swings.

A third case (11044), female, manic-depressive psychosis, manic, was over-conscientious and worried about spiritual matters.

I (b) Cases illustrative of conflict between religious and sex ideas.

CASE 11162, female, 36, Presbyterian. Diagnosis: psychosis with organic nervous disease, encephalitis. A revival produced conflict between religious ideas and sex desires. She wanted to marry and have a child but had no lover. To be an unmarried mother was wicked and of the devil, so she compromised by day-dreaming.

CASE 7911, male, 29. Diagnosis: dementia præcox. Candidate for priesthood but failed to make good. Sexual conflicts and feeling of unworthiness for the church. Felt he had not been faithful to vows of chastity. Had had precocious sex experiences.

CASE 11038, female. Diagnosis: dementia præcox. A young girl, brought up in an extremely religious family, early developed scrupulosity about the minutiæ of moral behavior prescribed by her church; as she grew older conflict embraced the whole gamut of sexual ideas normal and abnormal. Because of mother's suffering and death she "lost all faith." Thought and expressed blasphemous ideas and was torn between fear of death and fear of hell.

In other cases conflict arose as result of: conflict of religion and sex ideas (7780, undiagnosed, probably schizoid); sexual laxity (10985, manic-depressive psychosis, depressed); asceticism and sex maladjustment (7874, manic-depressive psychosis, depressed); feeling of guilt because of irregularities in the marital relationship (7826, alcoholic psychosis); masturbation

and homo-sexuality (7833, manic-depressive psychosis, manic); gonococcic infection which was identified with the unpardonable sin (7880, manic-depressive, depressed).

GROUP II.

Sub-group (a) includes, first, four women (11240, undiagnosed, probably schizophrenia; 11103, involutional melancholia; 11031, toxic psychosis, due to drugs; 11204, manic-depressive depressed), who left their own church to marry husbands of a different faith. In two instances the husbands were divorced men, in two birth control had been practiced—factors which increased their difficulties by violating other religious prohibitions. In all there was parental objection, but in one at least (11240) there was no overt personal conflict till after the psychosis developed (see summary in body of the paper).

In another case (7841), alcoholic psychosis, a young man of mixed religious parentage, involving no conflict, lived a normal religious life until 21 and then coincident with the onset of his psychosis formulated his own religious philosophy, introspective, analytical and critical, but illogical. This is suggestive of the metaphysical type of former days.

Five other cases (11065, manic-depressive, depressed; 10954, manic-depressive, depressed; 10951, manic-depressive, depressed; 11219, manic-depressive, manic; 11151, manic-depressive depressed) were those of Jewish women. One had been brought up in a Christian school with good cultural surrounding and rebelled when she had to return to an impoverished and strictly orthodox Jewish home. Another impelled by an unhappy family life wished to turn Christian, perhaps as an escape. The other three had been attracted by Christian Science but in the end deserted their new faith, one because of metaphysical difficulties, the others because it failed to solve their problems.

II (b). In several of the cases we have mentioned there was a difference of religion between the husband and wife but no definite conflict. In the three cases which follow conflict was pronounced. A woman of 37 (11146), undiagnosed, probably dementia præcox, had been absorbed in Christian Science for 15 years and her conversation and hallucinations were richly colored by its phraseology. She was positive and intolerant, but in cases of illness the husband insisted on medical care. Because of this discord he and the children finally left her. A man of 31 (7779), without psychosis, a periodic alcoholic who neglected church for years and had been guilty of "mortal" sins, nevertheless several years after a civil marriage insisted on a religious sanction. A third case (10979), undiagnosed (dementia præcox?), a Quaker girl married a Catholic of Latin race. Then followed conflict and divorce. Instead of returning to her early faith she adopted the "code of Greenwich Village," thus completing her social isolation.

II (c). In this sub-group the family is mainly involved. Two cases were those of Mennonite women who reacted very differently to very rigid restrictions. The first (11061), involutional melancholia, was almost a fanatic and claimed the "gift of tongues." She thought it a sin to laugh. She regarded the marital act as sinful, and her attitude caused her husband, though a very religious man, to yield to the wiles of a "she devil" for which dereliction his wife later felt a certain responsibility. The older children did not share their parents' religious views and there was some conflict over moving to a fashionable neighborhood to suit their more worldly ideas. At fifty-one the patient became depressed, ceased going to church, discarded her uniform and insisted that she was a lost soul and could never be saved. The other women (11292), dementia præcox, to escape the restrictions of a strict religious home made an unsuitable marriage. After a drab life of 20 years she ran away with a Spanish-American adventurer, and lived a bohemian life for three years. At this time a paranoid psychosis became apparent, but she was still bitter against the falseness of her childhood religion, "hiding sins behind a garb." Two aged women (10958, manic-depressive psychosis, mixed; 11169, undiagnosed psychosis with somatic disease), staunch protestants, were both much upset by their children's change of religion. In one case at least it appeared to be a definite factor in precipitating the psychosis. Case 11109, manic-depressive, depressed, an Italian woman of thirty was influenced by her mother to forsake her traditional church for a frankly evangelical set. This accentuated a family discord already induced by the mother's defection. In the puerperium this patient had a vision of Christ holding out the sacrament as she knelt in prayer over her child; and thereupon sent for a priest to baptize the child. Case 10989 undiagnosed, an hysterical girl of 24 idolized her brother, a clergyman, who protected and advised her. Her idol was broken when she found after his death, that he had been addicted to drink. She then depended on her sister, who later entered a convent. She upbraided her sister for disregarding everyone but herself and deserted the church because of the heartlessness of its demands. This estranged her from the family who felt that the service of the church was the most glorious one could follow and could not comprehend the patient's attitude. The patient herself talked frequently about an inner conflict "of two selves which struggle with one another."

II (d). Case 11224, manic-depressive, hypomania, a Jewish girl of 24 was brought up in an orthodox Jewish family, in a country town, where they were practically ostracized. She was subjected to a strict family supervision and discipline but was rebellious against control, had irrepressible sexual craving and sought sexual experiences outside the home. Case 10965 is summarized in the body of the paper. Case 10970, manic-depressive, depressed, an elderly Jewish woman attributed all her troubles to the fact that she was born a Jewess while her friends and neighbors were Catholics. This conflict was only a part of the struggle to keep up appearances, eco-

nomic, educational and social. Case 11197, manic-depressive, manic, a woman of 59 was reared in the Amish faith; on marriage she joined the United Brethren, thus placing a social barrier between herself, and her family, who no longer could sit at the table with her. However she was zealous in her new faith and in her manic psychosis a "booster" for religion.

GROUP III.

III (a) Ideas of sin.

Sub-group (a) consists of 11 cases. All were affective reaction types and with one exception were officially diagnosed as manic-depressive psychosis or involutional melancholia. Case 7876 (the exception), dementia præcox with marked affective reaction, is "afraid of God." Another case (10998) accuses herself because she has given too little to the church; because of this God has blighted everything. One case (7778) thinks God has forgotten him because he has been a traitor to God and wife, and is therefore "afraid to face God." Following his father's death a young Hebrew (7920) becomes suddenly religious, after being spiritually unsettled, and says many prayers for his father. Another case (10999), an "agitated depression," takes suppressed delight in saying the worst things she can think of to shock her listeners. She says, "I have made out of myself that person opposite to God," and "I want to go to hell." The remaining six cases in this group do not specify any particular sins or conditions as the basis for their feelings of guilt or depression. Only sins in general are mentioned. Case 11244 feels that she is doomed for her sins although she admits that she has done no one thing beyond her failure to live strictly according to the ten commandments. An aged woman (11183) has lost her Saviour, experiences a spiritual deadness and will never get well because of her sins. A foreign missionary (7921) believes that he is a great sinner and finds that prayer no longer gives him the accustomed peace. Cases 7875, 7822, 7937 are characterized by similar ideas. With the exception of one Roman Catholic and two Hebrews the cases here cited are from the Protestant groups.

III (b). In this group are 11 cases, characterized by euphoric and hyperactive content; the diagnoses (with the exception of one dementia præcox) indicate affective reaction types. In three cases the content seems to be purposive. Case 10975 talks much of God and religion and wants to prove that there is a God; Case 10959 claims that after seeing the Lord Jesus she was saved; and that God sent her to the hospital to save others because she had been restrained too much in the past; Case 7929 has been commissioned by God to write religious plays that will rid the world of crime and sin. Three other cases show a tendency toward special mannerisms and speech. Case 11243 frequently repeats such phrases as "hung on the cross," "Pontius Pilate," "St. Teresa," "he is a preacher." Case 11176 says "I am the Virgin Mary—the mother of Jesus—I'll baptize you,"

and at the same time uses vulgar and obscene language. A woman (11144) begs to see a spiritual healer. She has had messages from her mother and other members of the family. She executes religious symbolic mannerisms. The five remaining cases seem to have their content based on some aspect of religious differences, such as differences as to cult, race, etc. Case 11036 has an aversion for the Roman Catholic Church; Case 10996 has conflict centering about religious differences and thinks she will become a Protestant; Case 7878 has forsaken Jewish dietary laws and rationalizes action by saying that God is on his side; Case 7873 is an adherent of "Temple of Light" and is keenly interested in faith healing; Case 10974 thinks she is being persecuted by Gentiles and prays that they, having inflicted sufficient injury, may desist. Asks God why He permits them to persecute her.

III (c). Consists of six cases. Case 11110 is summarized in the body of the paper. Two cases (11245, 111189), are of women who believe that they are to be mothers of God's son. One is without conflict, either moral or spiritual, while the other has feelings of guilt based on moral conflict. Another case (11249) having strong religious ideas and delusions, thinks that she has lived a sinful life and fears communion because she omitted many sins when she made her confession. Case 11064 is a case of a Baptist who thinks she has been alienated from God but is confident that Christ has called her to the Salvation Army. Case 7886, a man of 29, interprets minor occurrences in a paranoid way; a hot radio tube meant that Christ and he were going to hell; because his shirt was open at the neck people took him for Judas.

III (d). Cases 11248 and 11178 form the shape of the cross with their arms and body, the former denuding herself for the ceremony. There is no suggestion of conflict, sense of sin, or feelings of guilt. Some anxiety and depression is present in 11178. Case 11106 constantly maintains the posture of the praying mantis; mumbles the Lord's prayer; otherwise mute. Case 11281 distressed by best friend entering convent, kneels, prays and sings hymns. Case 10973, a typical manic, talked much of God, prayed and extended her hands upward in supplication.

In addition to the above cases we selected those with religious content from a group of 100 affective psychoses studied by Dr. Strecker from a prognostic standpoint. Three of these cases belong to our first group (excessive religious interest or conflict between religious and sex ideas), and three to our second group illustrating other types of religious conflict. The remaining 22 cases represented reactions which we regarded as symptomatic—ideas of sin and unworthiness, paranoid religious ideas, delusional and hallucinatory and finally catatonic manifestations. [Abstracts of these cases have been omitted; in general they resemble cases quoted in previous section.]

DISCUSSION.

DR. CLARENCE B. FARRAR (Toronto, Ontario).—Dr. Farr distinguishes cases presenting religious factors which appear to be of direct etiologic significance, from those in which such factors may be regarded merely as symptomatic. He further mentions the importance of constitutional traits. As no features of the mental life are more likely to be constitutional than religious tendencies, it would be interesting to know whether all of the cases in the several groups in this study were, before considering them from the standpoint of their psychosis, investigated with respect to their constitutional or habitual religious trends. In other words the question arises whether the separation of etiologic and symptomatic religious factors can clearly and safely be made.

The term "religion" means many things. It is as difficult to define as "law" or "right" or "insanity." It ranges all the way from dogmatic concepts of deity and the post-mortem fate of the individual, to the widest generalizations in ethics and mental hygiene. But whatever meaning we choose, it must be admitted that religious attitudes of one sort or another are universal, if we include under such attitudes not only the protagonist position but also neutral or hostile standpoints.

Probably the most serviceable classification of religious attitudes is that of Sir William Osler in his memorable lecture "Science and Immortality." You may recall his three types. At one end of the scale is the small band of devoted Theresians, so-named from St. Theresa the ascetic Carmelite nun. These are the deeply religious folk for whom the life of the spirit is the only real life. As extreme members of this group we find the so-called religious fanatics. At the other end of the scale are the Gallionians, "for Gallio," as you remember, "cared for none of those things." Here belong the scoffers, the skeptics, the agnostics, and at the extreme end of the scale the atheistic fanatics. But neither of these groups looms conspicuously large in the population; between them, as a literal mean, is the vast group of Laodiceans, those whom the Apostle derided because they were luke-warm, neither hot nor cold, going whichever way the wind blew. This group comprises the many who take no particular stand in religious matters either for or against, as well as those who nominally profess but practically are indifferent. Those who earn the title "hypocrit" may also be included here. It is safe to assume that the Laodiceans considerable outnumber the Theresians and Gallionians together.

These points have an obvious bearing on the study of psychotic cases with religiose symptoms. It is necessary to know the individual patient's normal or habitual attitudes and tendencies in these matters in order to evaluate his morbid manifestations.

About 14 per cent of Dr. Farr's cases presented psychoses "with definite religious content." It would be interesting to know how many of these could be described as Theresians; and how among the remaining 86 per cent were represented the other types of the Oslerian classification.

And here arises another significant question. Someone suggests that the discussion of religious topics in a scientific setting is rather a delicate matter. It is worthwhile asking ourselves: Why may such a discussion be a delicate matter, as we are well aware it often is; and is there any reasonableness in such delicacy? Underlying this situation we are conscious of the traditional differences between scientific and religious approach to truth; on the one hand, sceptical inquiry; on the other, faith. But religious attitudes, beliefs, practices, are all part of human experience and as such cannot be divorced from the comprehensive study of man; and the study of man as a phenomenon in nature is merely a division of the broad field of science.

The methods of science are fairly common knowledge; patient inquiry with a minimum of the personal element, painstaking accumulation of facts which are checked and re-checked, analyzing findings and drawing conclusions in accordance with strict principles of logic.

Having this in mind we note that there are two kinds of religious teaching. One has to do with individual closed systems of religion, such as Christianity, Buddhism, Mohammedanism, etc., with their more or less mutually exclusive theologies embodied in creeds and dogmas which the faithful are required to accept, and which usually exalt the particular religion above all others; the other kind, is the undifferentiated science of religion as an aspect of human development, and without primary interest in the respective merits of epochal or racial varieties, except as expressions of the cultural types of the peoples concerned.

Unfortunately, it seems to me, it is the first kind of religious teaching which prevails instead of the second; and it does not make for illumination and tolerance. It is the temper of the science of our day to study things by investigating their origins. Only the second type of religious inquiry just referred to can be depended upon to apply this method. Thus the study of religion becomes the field of the anthropologist, the sociologist, the psychologist, the biologist, rather than the exclusive domain of the theologian. If this is a reasonable view, then religion in all its phases should be studied in precisely the same way that geology, or astronomy, or botany, or psychology is studied. In the schools we teach young people the rudiments of science. The scientific method is used in all subjects but one, namely religion. That is either untaught or is presented in one of its exclusive dogmatic forms. It is considered good that the youth should learn something of physiology and physical hygiene; even mental hygiene is coming into its own in the schools. They learn something of the origins of life and the beginnings of mind; and it may fairly be submitted that they would profit by scientific instruction concerning the nature and origins of religious customs. Such instruction might be calculated to do away with much of the mystery and all of the fear; and it should go far to remove the isolation barrier which has kept the subject of religion in a territory of its own, apart from all other fields of human investigation.

Where would such a course lead? It may possibly be objected that it would tend to make the young folk even less religious than they now are. In the traditional orthodox sense it probably would, but would it not also foster a personal attitude and outlook characterized by the qualities of health which mental hygiene demands, and to which each oncoming generation has the right? Might it not be expected to contribute its share in neutralizing the morbid tendencies which in so many patients appear as habitual or constitutional traits, and which are exemplified in the cases which Dr. Farr has so instructively discussed?

THE TREATMENT OF INVOLUTION MELANCHOLIA WITH OVARIAN HORMONE.*

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The concept of involution melancholia was defined by Kraepelin in the seventh edition of his text-book as the "pathological states of anxiety in the more advanced age which are not episodes in the course of other forms of insanity. Delusions belong also to this clinical picture in addition to the mood disturbance." In the clinical picture he described sadness with apprehension; doubts and fears; self-accusations; delusions of calamity, death and poverty to self and members of the immediate family partially based on hallucinations, and hypochondriacal complaints with confusion and insomnia. He emphasized the unfavorable outcome with a loss of emotional reaction to the delusions and the fading away of anxiety, leaving dullness and apathy with monotonous complaints. Dreyfus reviewed 69 of the Heidelburg cases and found that a large number had recovered, though in some cases the psychotic episode had lasted several years. In those patients who had not recovered he emphasized the existence of arteriosclerosis as the unfavorable complication. He felt that this group of melancholias belonged to the manic-depressive insanities and that the majority gave histories of previous depressions. Kraepelin accepted this view in the eighth edition of his book and no longer recognized involution melancholia as a separate clinical entity.

Hoch and McCurdy[1] reconsidered the subject in 1922 and felt that Dreyfus had given too favorable a prognosis to the group as a whole. Analysis of their cases showed two different groups; one with a good prognosis in which there was a strong affective reaction and which they classified with the manic-depressive insanities; the

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other in which there were delusions of a ridiculous, hypochondriacal nature or of a strong perverse sexual nature with negativism and insufficient affect, and which tended to show the deteriorating features of dementia præcox.

It is, of course, important to distinguish between the depressions of the involutional stage and the late or slow developing paranoid schizophrenias of the same age, and also to recognize the bad prognostic implications of an associated arteriosclerosis. Aside from this, however, there seem to be some important characteristics of the melancholias of the involutional period that distinguish it from the usual depressions. As Strecker and Keyes [2] have pointed out, many of the most evident and distressing symptoms of the involutional melancholias are merely exaggerations of symptoms common to the involutional period even when there is no outspoken psychosis. The symptoms mentioned by these authors are the feelings of jealousy and insecurity in family and social relations; emotional oscillations, especially depressions with impulsive behavior; and strong hypochondriacal trends. The first of these symptoms may be understood as arising in part from the psychological crisis of passing middle life. But all of them are also probably connected with the physiological crisis of involution with various new glandular and nervous adjustments perhaps involving the regulating mechanisms of the nervous system in the diencephalon (such as the midbrain and the hypothalamus) with the closely associated centers for the emotional life, consciousness and sleep. The so-called hypochondriacal delusions of gastro-intestinal, cardiac and other visceral nihilism with numbness of the limbs, eye symptoms, feelings of impending death, etc., may be readily understood as arising from disturbed sensations, from dysfunctions of the vasomotor and other visceral mechanisms of which the classical "hot flashes" are only one expression.

Organotherapy is not an illogical attack upon such a clinical syndrome. Strecker and Keyes [2] in 1922, treated 14 cases with intramuscular injections of corpus luteum and ovarian extracts of fresh tissues and were able to report favorable influences in both physical and mental conditions in all but four cases. They obtained a drop in blood pressure of from 5 to 30 millimeters in all cases, improvement in sleep, appetite, weight and skin conditions in six to ten cases; mental recovery (on a social criteria) in six cases

with some mental improvement in four other cases. Menses were re-established in one case after 17 months. However, in ovarian organotherapy one does not need to assume that the re-establishment of the menses is the desired aim in any important sense. But it is not unreasonable to suppose that the climacteric failure of the normal ovarian function may carry with it some abnormality in the involutional process, or some difficulty of the organism to adjust to the involution, which may precipitate visceral disturbances and associated symptoms. These may be met best, at least temporarily, until adjustments are more complete, by the use of organotherapy. The specific female hormone that is now known experimentally to be able to replace the normal ovarian function in producing the sex cycle, offers one obvious possibility.

For some time the various ovarian extracts and related substances have been used clinically by physicians for the symptoms that the climacteric woman brings to her physician. For this purpose, whole ovary, dried ovarian substance, and various fractions of mammalian ovaries and other glandular preparations have been used. Of these Novak [3] in 1924 said "The results are rarely striking and often nil to the level-headed observer. It cannot be assumed that a commercial extract can replace the normal ovarian secretion in the patient's body or that it originally contained any of the active hormones of the ovary. Here lies the crux of the whole problem whose solution will depend in a large measure on the work of the biochemist." Meanwhile, a great deal of work has been done by the biochemist; but more recently the same author,[4] in regard to the more advanced work with the follicular hormone, has said, "I do not believe that thus far any worthwhile therapeutic results have been achieved. There are a number of reasons, but one of them is that the follicle activity is responsible for only a fraction of the physiological cycle." Fraenkel [5] in 1930 had demonstrated the importance of the corpus luteum, and quite recently Corner and Allen [6] had further demonstrated that the corpus luteum was equally important with the follicular hormone. But according to Novak even this is not enough for intelligent organotherapy, as the other endocrines also play a part, especially the thyroid, pituitary and suprarenals. The rôle of the pituitary has been emphasized by Zondek and Ascheim [7] and Steinach and Kunn,[8] although it is thought that perhaps the anterior pituitary works indirectly through its effect on the gonads.

The pessimistic view regarding the effect of ovarian therapy is avowedly based upon the failure of the extracts to re-establish menstruation in amenorrhea. But as stated above, there still seems to be some justification in using the hormone as a therapeutic attack upon the various symptoms associated with the climacteric disturbance in visceral adjustments, especially in involution melancholia.

The history of the evolution of the ovarian hormones now in use is of considerable interest. After Stockard and Papanicoloa[9] found in 1917 that the sexual cycle could be followed in the various mammals by the changes seen in the vaginal smears and since Iscovesco[10] had already determined the method for preparing the active substance which Frank[11] found later to be present in the follicle; Allen *et al.*[12] were able to reproduce the sexual cycle in spayed rats by means of follicular fluid. He and Doisy and collaborators[13] later obtained the active principle free from protein or cholesterol as a fat or alcohol soluble substance from all genital tissues of the female including both the follicles and the corpus luteum and in smaller quantities from other organs as well. It was found to be non-species specific. They standardized it in "rat units" which they defined as "the quantity of material necessary to induce estrus as judged by the smear method in an ovariectomized sexually mature rat weighing 140/20 grams. For physiological reasons three injections were made at intervals of four hours." Estrus usually occurs in three days.

In experimental animals this substance will not only produce the normal estrous cycle as judged by the vaginal smear method in rats, but it will cause spayed monkeys to menstruate (Allen and Doisy[13]), it will hasten the maturing of female animals,[13] is said to produce estrus in senescent rats and mice (Steinach[14] and Laquer[15]), and to induce mammary gland growth. In the pregnant female rat it may produce abortion in the early stage.[13] In male animals it delays maturity in the immature and causes degeneration of the testes in the mature, according to Herman and Stein.[16] Meanwhile the Dutch workers, Laquer and DeJongh,[17] had obtained a water soluble preparation which they call Menoformen and which was also found to be active in producing the estrous cycle in castrated animals. It also increased the size of immature organs, retarded growth of male organs and increased metabolism in castrated female animals.

Besides the work of Strecker and Keyes[2] on their series of involution melancholias, there have been, of course, other clinical studies in the use of ovarian extracts as a therapeutic measure. Pratt and Allen[18] used the follicular hormone in women with artificial menopause and reported after five injections an increase in the size of the uterus with a slight uterine bleeding and a subjective feeling of pelvic pressure such as is characteristic of menstruation. They also reported an improvement in a case of relative amenorrhea. Campbell and Collip[19] used the so-called anterior-pituitary-like extract of placental tissue in a series of deranged ovarian functions such as sterility, dysmenorrhea, and relative amenorrhea with what they considered to be encouraging results. Some cases of sterility conceived and some cases of dysmenorrhea were relieved. Other cases reported a feeling of general well-being and mental alertness after the taking of the extract. It was given by mouth. Zondek[20] reports obtaining menstruation in a castrated woman with the female sex hormone. Ping and Patterson[21] used corpus luteum and whole ovary by mouth and follicular extract subcutaneously for menopause symptoms and concluded that they were all probably useless in these conditions and less helpful than bromides and phenol barbital. Frank[22] had also had some clinical experience with the sex hormone but does not report any strongly favorable results.

It was decided to try some of the new preparations of the standardized female sex hormone on a few selected cases at the Boston Psychopathic Hospital, not only to follow the clinical course of the involution psychosis and the menopausal symptoms, but also a series of indicated laboratory tests. Squibb's Amniotin was the substance used. It is a water-soluble extract from the fetal fluids of cattle prepared in 5 cc. ampoules and standardized in Allen-Doisy rat units so that each cubic centimeter contained 10 or 20 rat units. In average cases it is recommended that 20 units be given intramuscularly for three to five days about ten days before the period is expected. It is also prepared in pessaries of glycerinated jelly containing 40 rat units, one of which may be introduced daily into the vagina for three to five days about ten days before the period is expected. Both substances have been tested in the Squibb laboratories and found efficient in producing estrus in castrated

rats and monkeys.[23, 24] The substance is non-toxic and much larger doses, even to several times the above amounts, are recommended in more stubborn cases.

We planned to follow the course of the blood pressure, basal metabolism, blood chemistry (including non-protein nitrogen, uric acid, cholesterol, fasting sugar and sugar curves) and the galactose tolerance. We have already noted that Strecker and Keyes [2] reported that their most favorable results in treating involution melancholia with organotherapy was evidenced in the drop in blood pressure from 5 to 30 millimeters in all cases treated. Laquer [15, 19] reported no effect on blood pressure or pulse rate by injecting the sex hormone intravenously in dogs, but this was merely a test for toxicity in normal dogs and does not bear on the question of lowering increased pressure in pathological states. King and Patterson [21] showed that oöphorectomy had no lasting effects on the basal metabolic rates in women. They also made a study of the basal metabolism in 23 women before and after ovarian therapy and reported that in 12 cases in which corpus luteum was used there was a heightening of the basal rate averaging 3 per cent in all cases, but showing definitely that in cases of low basal metabolism there was an increase towards normal with this treatment. But those cases treated with whole ovary and follicular fluid showed no change. Loewy and Richter [25] reported a reduction in metabolism rate in female dogs after oöphorectomy lasting from two to six months with a subsequent elevation after injection of ovarian extract. Zondek and Bernhardt [26] raised the metabolic rate of castrated women 12.4 per cent with dried pig's ovary. Laquer [19] reported an increase in basal metabolic rate after the use of female sex hormone in castrated female animals but not in males. Frank [24] therefore comes to the conclusion that castration causes a slight diminution in basal metabolism and "the injection of female sex hormone again raises the basal exchange to a normal level and that this effect is sex specific." Geist *et al.*[27] on the other hand found no change in the basal metabolic rate, blood pressure or blood chemistry following bilateral oöphorectomy in 48 women. Bowman and Fry [28] have shown that there is a tendency for low basal metabolism in mental diseases in general though no cases of involution melancholias were studied in this connection. Bowman [29] has also studied the blood chemistry in a series of mental diseases and found that in general

the blood chemistry was within normal limits, except in general paresis or when there was some cardio-renal complication. It has been held by Folin and Berglund [30] and Cannon [31] and others that intense emotional states produced glycosuria. But Bowman and Kasanin [32] found that in the emotional states associated with mental diseases there were no marked deviations from the normal in fasting blood sugar. Four cases of involution melancholia showed an average fasting sugar of 106.2 milligrams as compared to an average of 102.8 milligrams for the whole series of 148 patients. Geist *et al.*[27] also reported no variations in blood chemistry in oöphorectomized women. The galactose tolerance test is based on the principle that women show some variation in their galactose and lactose metabolism in relation to their reproductive functions, especially in pregnancy and lactation. Rowe [33] reports a normal difference between sexually mature men and women in respect to their galactose tolerance as determined by the amount that may be taken before it is spilled into the urine. In men the tolerance is about 30 grams. This is the tolerance for adolescent girls before sexual maturity, when it tends to become 40 grams until menopause, when it again drops to 30 grams. For the method of the test, reference may be made to the work of Watkins [34] who, however, contradicts Rowe's work, claiming that the tolerance for men and women is alike, except just previous to and during the menstrual period, when it tends to be increased as it is in pregnancy. It is evident, of course, that if Rowe's claims should stand, this test would be of special value in studies of the involution period.

During the years 1929 and 1930, a series of seven cases were treated with amniotin. These cases seemed to us to belong to the involutional melancholia group.

The method of treatment varied. At first, cases were treated by hypodermic injections and were given comparatively small doses for brief periods, as 20 units daily for five days. Later, the dosage was increased and the periods prolonged, so that we sometimes gave 40 units daily for a month at a time. In some cases, we tried the use of vaginal pessaries. At no time was there any evidence of toxic or undesirable reactions from the use of the drug. However, certain patients objected strenuously to being given hypodermic injections and became more excited and violent. In other cases, we have seen patients develop delusions of being poisoned. The psy-

chological side of such treatment must, therefore, be taken into consideration. It was largely to avoid such reactions that we tried the use of vaginal pessaries. Here, also, the psychological effect of inserting pessaries into the vagina proved to be as important as injections by hypodermic needle. As would be expected, we found patients who would not allow such treatment or who complained that they were being tampered with sexually. Difficulty, therefore, was experienced in securing cases that would not only submit to treatment, but also coöperate in the various tests. Although but seven cases are reported, treatment was attempted in several times that number of cases.

A discussion of the individual cases appears the best way to bring out the different points we wish to emphasize.

CASE I.—M. R., 47 years old, married. Admitted April 11, 1929. Discharged (on visit) February 28, 1930. Improved.

The patient was of Irish descent. There was a family history of excessive alcoholism in the paternal grandfather and the father; a cousin was cared for in a mental hospital and one older sister developed a severe psychosis of a depressive type shortly after the patient was admitted to the hospital. She was born in Massachusetts in 1881, the youngest of three. Her mother died when she was nine and she was cared for by an aunt; then she and her sisters traveled about the country with her father, living in hotels and lacking regular habits of life. Her father favored her and she had a strong attachment to him, but also for one of her sisters. She was slow to make other friends. In spite of her irregular schooling she completed one year of high school and was a very good student, loving to study but reticent about reciting. She had to leave school to work at home because of financial reverses and was very disappointed in this. She did housework at home for five years. Then she tried to become a nurse, and after that to do some clerical work, but disliked both and did not adjust well. She then lived with a wealthy family caring for the children while the mother was suffering from a depression. This afforded her a very secluded, protected and luxurious life for a number of years until this home was broken up. Shortly after that she was married.

She always lacked self-assertiveness and was shielded by her father and sisters in every position she maintained in life. She was upset by her father's death when she was twenty-six and by a disappointing love affair a little later. She married at thirty-six, knowing little about sex and was very apprehensive. Following the birth of her two sons, now eight and ten years old, by Cæsarian section, further pregnancies were advised against and her husband practiced coitus interruptus for awhile and then ceased sex relations entirely. The patient was sexually tense and dissatisfied and became preoccupied with the likelihood of her husband's practicing masturba-

tion. The possibilities of such habits developing in the boys caused her great concern and she became very solicitous with them, and misunderstood and misinterpreted many things done by her husband and the boys, believing that they were becoming degenerate, turning into animals or becoming insane. This was all a slow, gradual evolution over many years. Finally, April, 1929, she became acutely agitated, suicidal and somewhat confused.

She was admitted to the Boston Psychopathic Hospital on April 11, 1929, where she was found to be depressed, crying and anxious to be reassured. She expressed a great deal of self-pity, remorse and perplexity. At night she often had auditory hallucinations, thinking she heard at times the voices of her children or animal-like sounds. She had delusions that her children were turned into animals, and would become disturbed and agitated about their welfare. She developed a suspicious attitude in the hospital, questioning if she were doped and if the Catholics were in the "plot," and uncertain about the identity of doctors. Her mental status was variable over short periods. For hours she would be quiet, coöperative, appreciative, with good insight; at other times suspicious, with persecutory delusions, but most often she was bewildered, apprehensive and agitated about the sex problems of her family. In one outburst she admitted masturbation and claimed to have had a sex affair with a man before marriage, thus adding self-reproach to her other preoccupations.

Her physical condition was good except that she was about thirty pounds overweight. Her blood pressure was 120/80; the urinalysis was always negative. Her blood examination showed 82 per cent hemoglobin, 5,300,000 erythrocytes, 7900 leukocytes. The Wassermann test of the blood was negative. X-rays of skull, sinuses and gastro-intestinal tract were negative. Basal metabolism was — 19. Blood non-protein nitrogen was 25.1, uric acid 2.9, cholesterol 77, fasting sugar was 103. The sugar curve rose to 150 in the first hour and returned to 98 in the second. The galactose tolerance for 40 grams was normal. The pelvic examination showed a nonparous introitus, a firm cervix, a large firm uterus and two abdominal scars from Cæsarian sections.

She had not menstruated since her present illness, her last period being December, 1928. Up to that time her menses had always been regular and normal since their onset at fifteen.

She was placed on amniotin treatment, twenty units daily for five days, intramuscularly, starting April 26, and began menstruating on the third day of the treatment. In all she received treatment as follows:

Starting April 26, 20 units a day intramuscularly for 5 days.
Starting May 18, 20 units a day intramuscularly for 5 days.
Starting June 15, 20 units a day intramuscularly for 5 days.
Starting July 15, 20 units a day intramuscularly for 5 days.
Starting August 10, 20 units a day intramuscularly for 5 days.
Starting September 8, 40 units a day per vagina for 5 days.
Starting October 7, 40 units a day per vagina for 5 days.
Starting November 6, 40 units a day per vagina for 5 days.
Starting December 5, 80 units a day per vagina for 5 weeks.

She again showed a slightly bloody discharge on January 16, 1930, but never menstruated again.

In the course of this period of treatment patient showed a definite mental improvement, gradually giving up many of her delusions and preoccupations, sleeping better and taking more interest in her environment, and becoming less unstable emotionally. She was finally discharged to her home on February 28, 1930, and reported back to the Out Patient Clinic from time to time, where it was found that she was continuing to improve and was nearly back to normal, though still lacking in self-confidence and somewhat preoccupied about sex matters.

During the treatment her blood pressure stayed within normal bounds, systolic ranging between 115 and 120 and diastolic ranging between 75 and 80. She was thirty pounds overweight on admission but gradually was reduced to normal. Her non-protein nitrogen was 25 and 30 throughout. The blood cholesterol was very low at the onset, 77, and it gradually rose to 168 at the time of discharge. Uric acid, fasting blood sugar and sugar curve were normal at all times. Basal metabolism was always low, ranging from — 10 to — 24. Galactose tolerance continued normal for 40 grams.

In this case, there was good social recovery after nearly 11 months of hospitalization. The insidious onset over a period of several years, the auditory hallucinations and the type of delusions suggested a less favorable outcome.

The effect of amniotin on the menses is of interest. Although she had not menstruated for four months, there was a slight menstrual flow after three days of treatment. After this, however, there were no menses for eight months although she received treatment regularly each month. Finally, in January, following five weeks of intense daily treatment of 80 units of amniotin by vaginal pessaries, a slight bloody discharge was noticed for one day.

CASE 2.—J. B., 49 years old, married. Admitted June 26, 1929. Discharged February 20, 1930, to Danvers State Hospital, condition improved. Still at Danvers State Hospital, April, 1931.

The patient's family were Scotch. There was no history of mental disease. The patient was the third of six siblings, all born in Scotland. Her mother died when she was small and her father came to America and worked as a brass moulder, sending for his children five years later. The three younger ones were adopted and nothing further was known about them. The patient lived with her father and older brother and sister and finished the seventh grade at fourteen in this country. She then worked as a domestic until her marriage at twenty-eight to a machinist. She has had three children. Her oldest daughter of twenty has epilepsy, her second daughter of eighteen had tuberculosis and died while the patient was in the hospital, and a son of ten is dull mentally. Her medical history has been negative until her present illness. Her menses were established at thirteen and were

normal and regular until the last few months, when they have appeared at seven to eight week intervals, have lasted but two days, and have been scant.

She was described as being sociable and cheerful, but always worried over her children a great deal. She was over-solicitous with them and had little recreation.

She had a previous breakdown at eighteen or nineteen. She was not able to work for a year, but the details are not known.

She began to worry excessively in the summer of 1928 when her second daughter developed tuberculosis. In the fall, after the daughter went to a sanatorium, she began to complain of rheumatism in her knees. She went to an osteopath and was treated by him. As her symptoms progressed into her back, she complained that he had injured her back. She became very depressed and self-centered, and complained that the osteopath had wrecked her nervous system. She did not sleep, lost all interest in her housework, cried a lot, was apprehensive. She went to seven doctors and two clinics but was not satisfied with any of them and always wanted to go to another one. She was especially restless at night and would let no one in the house sleep, as she talked continuously about her complaints. She threatened to hurt her son and talked of suicide. She was taken to two different sanitariums but would not stay. Then she complained that no one liked her and people watched her if she went on the streets. Two nights before admission she locked the family out of the house and threw things out the window at them.

On admission she was restless, disturbed, self-centered and apprehensive; and had numerous hypochondriacal complaints. She complained of pressure in her head, drawing sensations in her back and neck that extended into her arms, with numbness of the arms, and drawing sensations in the hands, of tenderness in her abdomen, etc. She slept poorly at night. She was constantly asking for attention in order to reiterate the same complaints and to ask for medicine.

She was forty pounds overweight. She frequently showed a temperature elevation of half a degree or a degree and her pulse was usually about 90. No foci of infection were ever found. Her teeth had been all removed. X-rays of the gastro-intestinal tract, gall bladder, spine and knees were all negative. The blood pressure was 135/85. Spinal fluid and blood Wassermann were negative. Urine analysis was always negative. Blood examination showed 90 per cent hemoglobin, 3,810,000 erythrocytes and 9300 leucocytes.

Her basal metabolism was -17 to -24 on repeated tests. Blood nonprotein nitrogen was 31.6, uric acid 2.7, cholesterol 190, fasting sugar was 105. The sugar curve showed a rise to 144 in one hour and a drop to 80 in two hours. Galactose tolerance for 40 grams was normal.

The patient's last menstrual period was June 23, 1929. The previous one had been seven to eight weeks before.

She was started on a course of amniotin, 30 units a day intramuscularly for five days on July 17. Her next menstrual period occurred August 8, and the next course of amniotin was started August 17. She again men-

struated, beginning August 30. On September 18 vaginal pessaries to forty units daily were given for five days. A similar course of vaginal pessaries was given in October and November, but she did not menstruate again. Vaginal pessaries to forty units were given daily during the month of December.

Patient's behavior became somewhat better adjusted to the hospital. She was coöperative and carried out the routine of hydrotherapy and occupational therapy fairly well. She continued to complain of the distress in her back and head, though somewhat less arduously. She was usually restless at night. There was some definite improvement, but it was slow. She lost in weight, but even six months after beginning treatment was still 10 pounds overweight. Her basal metabolism was raised to — 10. She continued to have a slight elevation in temperature and rapid pulse. The other laboratory tests, blood chemistry, galactose tolerance, etc., remained the same. The blood pressure dropped to 105/66.

She was transferred to Danvers State Hospital February 20, 1930, where she still remained a year later and was said to be mildly agitated but cooperative and occupied. She constantly complains that the nerves are dried up on top of her head, that someone has stolen her brains, that she cannot read or write or think or talk; that it is as though she were lifeless, and death is the only thing that is possible for her. She said she has forgotten her husband and children and that they won't have her home because she threw shoes at them. She moans a good deal and is a restless sleeper.

Although this patient is still in the hospital and presents some extreme delusions relative to her body, her ultimate prognosis is not hopeless. Her delusion of her brains being dried up or stolen probably arises from somatic sensations of numbness and associated with difficulties in concentration. Her idea that she is not wanted at home because she threw things at the family is justified. Her obesity and low basal metabolism undoubtedly represent glandular disturbances. They improved somewhat under this treatment. Menses ceased during the treatment, but as will be brought out more pointedly in subsequent cases, this may be a really desirable accomplishment of the treatment itself. It is just such cases as this, with marked hypochondriacal trends, based undoubtedly on somatic sensations, profound disturbances in sleep regulation and emotional control, and evident abnormalities in metabolism and weight, that offer the most in a persistent organotherapeutic attack upon the specific symptoms; and the fact that more has, so far, not been accomplished in this case ought not to be discouraging.

Pluriglandular therapy would seem to be indicated in such cases as this. Certainly the addition of thyroid extract appears logical in view of the low basal metabolism and obesity.

CASE 3.—A. S., 43 years old, married. Admitted July 23, 1929. Discharged March 20, 1930. Committed to Worcester State Hospital, condition unimproved.

Patient's ancestors were of the Swedish skilled laboring class. There was no family history of mental disease. The father died of nephritis at 70, after being bedridden for several years. The mother died at about 65 of a head injury sustained several years before. The patient was the devoted nurse of this mother in the last years of her life. She had two sisters and two brothers, all alive and well. She was next to the youngest.

She was born April 9, 1886, in Sweden. Her birth and development were normal. She finished the public school at 12 and was an average student. She became a servant girl in Stockholm at 14 and continued at this until her marriage in 1913 at 27. For some years before her marriage she was in love with another man and hoped to marry him, but he dropped her. At that time she was so upset that she quit work for a couple of months and visited relatives. Details of this episode are not known. She was still in love with this man when she married her husband whom she had known for two years. He was a hardworking blacksmith and had a hard fight to make a living, especially since coming to this country in 1927, where he was joined by the patient and their children the next year. The couple have never loved, but only tolerated each other, and at times the patient has considered leaving her husband, but has not because of the children. They have four children, 16, 15, 13 and 11 years of age. Sex relations occurred when the patient desired them and were satisfactory. Menses started early, but were not established until 15. They were regular until May, 1929; since then they have been irregular. Her medical history included only measles and scarlet fever. There were no known complications with the scarlet fever, and no history of rheumatic fever to account for her mitral insufficiency.

Her present illness started in June, 1929, with a gradual exaggeration of her personality traits. Her depression became profound, she brooded over religion, thought she had been forsaken by God and had committed unpardonable sins. She talked of killing herself if she dared, because she had brought only shame and misery to her family. She began to refuse to eat in order that she would die quicker. She spoke of having died mentally and spiritually, and being alive only physically. On July 21 she drank an overdose of her "heart medicine" (digitalis?) hoping it would kill her, and was brought to the Psychopathic Hospital two days later.

On admission the patient was quite thin and emaciated. She had a mitral regurgitation, fairly well compensated, with a blood pressure of 165/100, and had exaggerated tendon reflexes. X-rays of head, skull and sinuses were negative. Pelvic examination showed a poor perineal body. The uterus was sharply antiflexed. Urine analysis was repeatedly negative. Blood examination on admission showed 5,480,000 erythrocytes, 88 per cent hemoglobin and 11,800 leukocytes. The blood Wassermann test was negative. The blood non-protein nitrogen was 32.9, uric acid 3, cholesterol 162, fasting sugar 91. The sugar curve showed a rise to 200 in one and a half hours and dropped

to 156 in two hours. Galactose tolerance for 40 grams was normal. She would not coöperate for a basal metabolism test prior to treatment.

She could hardly speak any English, and all communication was through interpreters. She showed a great deal of anxiety and apprehension. She would cling to her husband in his visits and beg to be taken home and made some disconsolate efforts to express herself to nurses and doctors. She was the picture of misery, wringing her hands or holding her head in her hands, moaning. All movements were retarded. She was depressed and self-depreciative. She spoke of having committed the unpardonable sin and being despised by everyone for it. She felt that other patients in their every movement reviled her. She said her mind and soul were dead, but that her body would live forever. Her orientation was intact and her memory good.

She became worse during July and August, becoming more agitated and fearful. At times she thought she heard her family crying for her outside the door, refused to eat and was tube fed, did not sleep at night and complained of feeling worse in the morning when she got up.

Her last menstrual period had started July 21 and the next one was calculated to be due August 18. A course of amniotin consisting of 20 units intramuscularly per day for five days was started on August 12. She did not menstruate as was expected, but did show some improvement for a few weeks coincident with a drop of blood pressure to 100/70, and a slight drop in blood non-protein nitrogen. The basal metabolism was found to be +9. The patient did not menstruate again while in hospital. Subsequent to this she received a month's course of amniotin similar to the first one. During September, October, November and December she received 40 units daily for five days. During the whole month of January she was treated by vaginal pessaries, receiving 80 units a day for 31 days. During this time her mental picture gradually settled itself into that of an agitated depression, in which she worried a great deal about her children and said that she was being forsaken by God. Her blood pressure was again elevated and was 144/80 at the time of her discharge. In February, 1930, she developed erysipelas and during the course of the acute illness she was quiet and coöperative and showed little of the agitation and apprehension which had been so prominent previously. But as soon as she recovered from erysipelas her former mental condition returned. While under treatment, the non-protein nitrogen showed a gradual and steady drop from 32.9 in August to 22.4 in December. Otherwise the laboratory tests remained essentially unchanged during the course of her treatment. Her basal metabolism was never satisfactory, and it could not be determined whether or not treatment had affected it. However, in the beginning she had two basal metabolism rates of −8 and +10, whereas the last test done on December 17, 1929, was −18. At no time did she show complete tolerance for 40 grams of galactose. She was committed to Worcester State Hospital on March 20, 1930. A report from the Worcester State Hospital of her condition in April, 1931, states that she has continuously shown the picture of an agitated depression with a good deal of restlessness and that she complained constantly that

something had happened to her children and that God had neglected her. She would walk the floor, wringing her hands in a very tense and apprehensive state. She ate and slept poorly.

Here we have a case similar to the preceding one in many respects, but her delusions were always of sin or disaster to her family and never of a somatic or hypochondriacal nature.

After two and a half years in hospital, she now presents the picture of an agitated depression, gradually subsiding into a chronic course. This coincides with Kraepelin's early description of involutional melancholia but it should also be remembered that Dreyfus reported recovery in similar cases after four years.

It is of interest that the menses which had been somewhat irregular for three months, stopped entirely following treatment by amniotin. The fact that the basal metabolism was —18 at the end of treatment would also be an argument for giving thyroid extract in addition to ovarian extract.

CASE 4.—M. W., 43 years old, married. Admitted January 21, 1929; discharged June 7, 1929, to Worcester State Hospital. Died, Worcester State Hospital, February 6, 1930, of anemia and broncho-pneumonia.

The patient's family were of Irish extraction. There was no family history of mental or nervous disease. The patient was the second of 10 siblings, two of whom died in childhood.

She was born in Massachusetts in 1886. Little was known of her early life except that she was finicky about food, that she completed the seventh grade at 13 and was a bright student. She was then employed as a domestic and nursemaid until her marriage at 29 to a chauffeur. She had two daughters, aged 10 and 5.

In personality she was described as being the quietest, most dignified, meticulous and conscientious member of the family, but sensible, practical and very much depended upon by others. She was thrifty and meticulous about her work. She was unimaginative, serious minded, but never brooded.

The only important element in her medical history was a severe hemorrhage following the birth of her last child in 1922, requiring a blood transfusion. She had always had headaches and dysmenorrhea with her menstrual periods, necessitating one day in bed. For two years the periods had been irregular and the flow scanty, and she had been unusually irritable.

In May, 1928, she had a tooth extracted which broke off, her mouth was traumatized and she suffered from an overdose of novocain. She thought she had cancer. She saw eight different doctors and entered a hospital for thorough examination. After discharge she complained of weakness, took no interest in her housework, would lie about and did not eat. One night in early January when she heard cats outside her window, she said it was the devil after her. After that she would not get out of bed and worried about

not being legally married because she had given her age as 28 instead of 29. She claimed she was not pure enough to have her children, pushed them away from her if they came near her, and wanted her sister to adopt them. She would not eat, saying the devil who was within her would not let her.

She was admitted to the Boston Psychopathic Hospital on January 21, 1929, because she tried to jump out of a window.

On admission, the patient was depressed and told the following story: "Following the removal of some teeth, I had a complete collapse. And it seemed as though all my strength left me. Then it seemed as though my nerves died out and I had a terrible pain from the middle of my back to my head. Then I seemed to be in a stupor and didn't take any interest. I used to cry and think I'd rather be dead than feel that way. Then I thought I was possessed of the devil. I heard cats crying in the back yard and felt a tickle in my ear, and thought it was the devil's cry and he had crawled in my ear. I got a pain in my stomach and thought it was the devil. I smelled an awful smell. When I went to confession I thought I didn't confess everything right. I didn't want the children around me if I was going to be like that. I used to feel my legs drying up and that I was top-heavy. I would look at myself in the mirror and say, 'Are you Mrs. W?' I felt I would contaminate everyone."

At this time she appeared to have some insight and her intellectual functions were intact.

Shortly after admission she became very agitated, apprehensive, said she had a bad body odor and did not wish anyone to approach her. She did not sleep at night and would not eat so that tube feeding was necessary. If not restrained, she spent the time at the door shaking the door knob. Her conversation consisted in "Oh dear, I should not have done that!" or "Oh dear, I should not be here!"

Her physical examination was found to be essentially negative except for fine tremors of the hands. Blood pressure was 140/90. Blood examination showed 98 per cent hemoglobin, 4,930,000 erythrocytes, 4200 leukocytes, with a normal differential count. Urine analysis was negative. Gastrointestinal X-rays showed ptosis of the stomach and colon. Blood Wassermann and cerebrospinal fluid were negative. Pelvic examination was essentially negative. Basal metabolic rates was + 14. Blood non-protein nitrogen was 23.9; uric acid was 2.3; cholesterol was 16; fasting sugar was 80; after taking 100 grams of glucose the blood sugar reached 175 in one hour and dropped again to 80 in two hours. Galactose tolerance was 40 gm.

She had a heavy menstrual flow in September, 1928, and then did not menstruate until after admission to the hospital, January 21, 1929, when she flowed the first 10 days. Starting in the middle of March she was given daily intramuscular injections of 20 units of amniotin for five days. Five such courses of treatment were given with intervals of two weeks between each course. The last treatment was given May 29, 1929. She never menstruated again.

Late in March the picture changed from agitation to a profound, stuporous depression. She stayed in bed, was incontinent, refused food, resisted tube feeding, was irritable and resistive to any care, covered her head if visited by relatives, would not talk except to say, "I don't want that. Leave me alone." This picture persisted until her discharge.

Her weight dropped from 125 to 95 pounds, she became pale, with a hemoglobin of 85 per cent, blood count of 4,010,000 erythrocytes and 8300 leukocytes, with a normal differential count. In the first two months her blood pressure fell progressively from 155/90 to 70/45 but then gradually returned to a normal of 120/75. Her blood chemistry remained the same throughout. She coöperated with basal metabolism and galactose tolerance tests only once more in March. At that time her basal metabolism was +4 and she still tolerated 40 grams of galactose.

In June, 1929, she was transferred to the Worcester State Hospital, where she continued to present a picture of complete negativism and resistiveness and almost complete mutism. She was tube fed until her death, February 6, 1930, with a diagnosis of anemia and broncho-pneumonia.

In this case, we again find a lowering of the blood pressure while under treatment. Although there had been an excessive menstrual flow prior to treatment, there was a complete and permanent cessation of menses as soon as amniotin was given. It seems that this may have been the result of the treatment given and that such a result may be desirable.

This patient died in less than two years after the onset of the disorder. The mental symptoms gradually changed during this period from an agitated depression to a negativistic stupor. It is difficult to see any relationship between the treatment and the change in the mental picture.

Case 5.—A. J., 45 years old, widow. Admitted December 4, 1929; discharged on visit April 1, 1930. Diagnosis: Involution melancholia. Condition: Improved.

The patient's family was of English extraction, of good intelligence. There was no history of nervous or mental disease. The patient was second in a family of eight. One sister was said to be a very nervous type of person, married, had three children, the second and third being feeble-minded, and dying at the ages of 9 and 11.

The patient was born in Newfoundland, December 6, 1883. Little was known of her birth and early development. She was not thought to have had any neurotic traits. She completed the equivalent of grammar school education. She worked for a while in a factory, and left to marry at the age of 19. The exact age of onset of the menses was not known. They were regular and normal. For several months prior to admission there was a diminution of the menstrual flow. The use of alcohol, tobacco and drugs

was denied. Her married life was happy. There were three normal children, 21, 19 and 16 years of age. Her husband died August 3, 1929, of carcinoma of the stomach following an illness of one and a half years. The patient has never had any serious illnesses or operations. In 1915 she was in an automobile accident, was unconscious for a few minutes, but was not thought to be seriously injured.

She was described as being very cheerful, happy, easy-going, not very energetic, fond of company; tended to under-estimate her own abilities, made friends easily, was frank and open.

In September, 1928, the patient's husband had a gastric hemorrhage and she was told he was seriously ill. She cared for him at home. About December, 1927, the patient began to complain about her stomach, stating there was a constant pain. In January, 1929, she could not sleep well and took medicine for this purpose. She discontinued sleeping medicine, however, in April, saying that it was doped. She did not sleep well since. For several weeks prior to admission she only slept 1-2 hours a night. Since June, 1929, patient has not done any work about the house. She said, "I can't do it, I can't think." In September, 1929, she complained of numbness in her feet and then numbness all over, and pains in her arms. She said her stomach was all dead. For several months prior to admission she would refuse to eat at times, and for one month prior to admission she ate almost nothing.

On admission the patient was markedly underactive, she did not mix with other patients. Her movements were very slow. She seemed to have great difficulty in thinking. She was retarded in her answers. She was very undertalkative, she said very little spontaneously, and that was mainly with regard to her physical complaints and queries as to whether or not she would get well. She seemed unable to describe the way she felt, remarking that everything seemed different, that she felt markedly inadequate, but not stating that she was definitely depressed. She complained that there was no feeling in her stomach, that it was numb, that it felt as if it were dead, "as if the nerves were dead." There was no distortion of the outside world. Her memory was apparently intact. She did poorly on various tests, often giving them up and stating she could not think. She realized that there had been a change in her, but would not state that it was a mental condition.

The physical examination showed a thin, poorly nourished female. There was slight weakness of the muscles of the lower left side of the face, and a generalized lowered sensitivity to pain, as determined by pin prick. Otherwise there were no neurological findings. The teeth were in very poor condition. The blood pressure was 98/68. Gynecological examination showed a slight cystocele and rectocele with some lacerations of the cervix. Routine laboratory tests were negative. X-ray of skull was negative, X-ray of the gastro-intestinal tract showed some ptosis of stomach, the duodenal cap was long and showed some irregularity at times, but no constant defect. There was considerable iliostasis, and the colon showed a large residue in proximal half at 24 hours. The basal metabolism was — 9 and — 17, the blood non-protein nitrogen was 29.2, uric acid 2.9, cholesterol 130, fasting sugar 87.

The sugar curve showed a high sustained type of curve, being 154 at the end of two hours. Galactose tolerance was normal for 40 grams and for 50 grams there was a faint trace of sugar, but not enough for any quantitative determination.

Patient was given 80 units of amniotin a day by vaginal pessaries. Treatment started December 30 and continued to February 5.

The laboratory examinations at the end of the treatment showed a rise in the blood cholesterol to 240, the blood sugar curve was more normal, the fasting blood sugar being 99; at the end of one hour it was 138, at the end of two hours it was 118. The other laboratory findings were essentially unchanged. Two basal metabolism tests gave readings of —8 and —13, the galactose tolerance test showed a very slight trace of sugar after taking 40 grams so that there was presumably slightly less tolerance to galactose.

The patient showed slight improvement between the time of her admission and the time of starting treatment, December 30. It was noted on December 31 that she was a little more active and was beginning to take some interest in work at the occupational therapy department. She still complained of numbness and difficulty in thinking. She talked less about her stomach. The patient improved steadily and gradually during the time of treatment. On February 4, the day before treatment was discontinued, she said that her stomach felt quite well, that her appetite was better. She was more active although still slowed up. She would occasionally smile. She said that her head felt better. On March 7, it was noted that she was more cheerful, that she talked with the other patients, took an active part in work at the occupational therapy department, but was still slightly underactive. She showed good insight, stated that when she came to the hospital her nerves were run down from the strain of caring for her husband, and that she was worried about the possibility of having cancer of the stomach. She now believed that there had never been anything really wrong with her stomach. She was sleeping well and her appetite was good. Her blood pressure was 100/70.

In April the patient was discharged to her relatives. There was no menstruation during the time she was in hospital.

In this case, we have a marked hypochondriacal picture with physical findings which may have had some etiological relationship to the mental picture. There was underweight, hypotension, low blood cholesterol, low basal metabolism and a high sustained blood sugar curve.

Under treatment, the patient improved markedly and was discharged four months after admission. The blood cholesterol rose to 240 and the blood sugar curve was normal after treatment, but the low blood pressure and low basal metabolism were unaltered. Again, this suggests the use of thyroid extract along with the ovarian therapy.

CASE 6.—R. K., 49 years old, married. Admitted January 22, 1929, discharged June 7, 1929, condition improved. Transferred to Westboro State Hospital.

The patient's family were of Russian Jewish stock. There was no history of nervous or mental disease. The patient was born in Russia in 1880. Birth and early development were normal as far as is known. She attended private school in Russia for six years. She came to America when 16. She went to work in a store as soon as she arrived, and attended night school, learning to read and write English. She worked in a store until the time of her marriage. Menstruation started at 13 years of age, always regular and normal. Eleven years ago, when 38 years of age, she had a panhysterectomy and the ovaries, tubes and uterus were removed. She has not menstruated since then. She never used alcohol, tobacco or drugs. She was married when 21 years of age. Since marriage she has lived with the mother of her husband, and has been unable to get along with her. Two years ago the mother-in-law was taken to the Dorchester Home for Aged. The patient felt that she was partly to blame for this. The husband has had diabetes for the past 10 years. There were five children, the oldest 26, the youngest 15. All were normal. The patient had a hemorrhoidectomy 24 years ago and dilatation and curettage after the birth of her third child, 20 years ago, and an operation for removal of a growth under the arm, near the breast, 19 years ago. She had a hysterectomy 11 years ago.

The patient was described as being pleasant, agreeable, jolly and having many friends. She never complained and kept things to herself. She stayed at home, was a good housekeeper and was extremely religious. She was very affectionate towards her children.

In August, 1927, when 47 years old, the patient became depressed. She was excited and crying, felt sad, and did not sleep well. She improved somewhat but her condition varied. In September, 1928, her daughter was operated on for appendicitis. The patient became quite upset. Her condition continued variable. Six weeks later another daughter was operated on for appendicitis at the same hospital. The patient believed that her son's sweetheart was not going to marry him, but would marry someone else. When they were married at Christmas, 1928, the patient went to the wedding, but was very depressed and carried a bottle of mercurochrome and a safety razor under her clothing. She tried to cut her neck with the razor, stating she did not do it to kill herself, but to scare them so that the wedding would not take place. After this she said that she was dead. She cabled the chief of police to find out if her son was alive.

On admission the patient was quiet and coöperative. She said that she was nervous and sad, and that she was worried for fear her son might be killed by his wife. She stated that since September, 1928, she had a feeling like electric wires drilling through her head and this made her nervous. These feelings soon disappeared, however, and did not return.

Her intellectual functions were essentially intact, but she did not do very well on formal tests. She had some insight into her condition. She ad-

mitted that she was nervous and worried, but insisted that she would be all right if she knew that her son was safe.

In the hospital the patient gradually became more agitated and uncoöperative for the first three months. She then showed some slight but definite improvement, becoming less agitated and more coöperative.

The physical examination showed a fairly well developed and fairly well nourished female. The general examination was essentially negative. Blood pressure was 120/82, pulse rate 80. The neurological examination was negative. The urine was normal. X-ray studies of gastro-intestinal tract were negative. Blood Wassermann was negative. The basal metabolism was + 13. Blood non-protein nitrogen was 34, uric acid 3.3, cholesterol 200, fasting sugar 138. The galactose tolerance for 40 grams was normal, a very slight trace of galactose appearing in the first two-hour specimen.

The patient was placed on amniotin treatment and was given 50 units daily for a period of six days, beginning February 27, 1929. This same treatment of 300 units in six days was repeated three times, treatment starting on March 26, May 26 and June 26. Following treatment there was no essential change in the laboratory findings. The non-protein nitrogen dropped to 24, the blood cholesterol dropped after second and third treatment to 132 and 112, but after the fourth treatment it was 202. The blood pressure was 106/60 at the end of treatment. The blood sugar curve could never be done because of patient's unwillingness to coöperate, and the basal metabolism and galactose tolerance tests could not be repeated at the end of treatment for the same reason.

After discharge from the Boston Psychopathic Hospital the patient went to the Westboro State Hospital. There she was described as being restless, agitated and talkative. She had to be tube fed at times. She expressed self-accusatory ideas. She was extremely uncoöperative. At one time she expressed the idea that one of the nurses on the ward had killed her children. Occasionally she paced the corridor in a restless manner, wringing her hands and muttering to herself. Her facial expression was one of great anxiety.

On September 17, 1930, she was released from the hospital against the advice of the physician, in care of her husband.

This patient presents the problem of a woman who had an artificial menopause at 38 and who developed involutional melancholia about 11 years later. For those who feel that ovarian deficiency plays no rôle in the production of this disorder, the fact that 11 years elapsed after the artificial menopause before mental symptoms developed, would appear to be evidence for this viewpoint. The failure to respond to treatment might have a similar interpretation.

As in Cases 2 and 3, the patient's condition appears to be chronic but there is still the possibility of recovery since she has been sick for only three years.

CASE 7.—J. W., 56 years old, single. Admitted December 27, 1929, discharged February 20, 1930, committed to Danvers State Hospital, condition unimproved.

The family was of English and Irish extraction. The father was heavily alcoholic and was irritable after drinking. Otherwise he was patient and kind. One paternal aunt is said to have been nervous and to have worried easily. One brother was alcoholic and worked irregularly. Aside from this there was no history of mental or nervous disease in the family.

The patient was born in Massachusetts on July 31, 1874. Little was known of her birth and early development. She always had extreme fits of temper. At times she was finicky about her food. The amount of schooling she had is not definitely known. She went to either the fifth or seventh grade. It is not clear how well she got along in school. The patient herself said she stopped to go to work, but her sister was of the opinion that patient did poorly at school. The patient started work at 14 years of age. She did housework for a time, and then worked in factories. She always did unskilled labor. She stopped work in 1925 to take care of her sick mother. She had worked steadily until this time. Her highest wage was $16 a week. The patient did not use alcohol, drugs or tobacco. She never had any sex instruction, and as far as known never had any sex experiences. When younger she kept company with several men but was never engaged. She never seemed to care much for men. In 1915 she had an appendectomy; in 1919 she was operated on for hemorrhoids; in 1927 she was hit by an automobile; she was unconscious for a few minutes; she recovered in a day or two. No X-ray of the skull was made. Her exact age at the onset of the menses was not known but they were normal and regular. The menopause occurred in 1920 when she was 45 years old.

In personality she was said to have been always irritable and to have had a bad temper. She was always very neat and clean and a hard and steady worker; could not stand to see any work undone. She was very energetic. She had few friends, and at the parties she attended, she kept to herself. She was always somewhat self-depreciative. She was very prudish. She read nothing but newspapers. At the time of her mother's death, February 12, 1929, the patient seemed dazed for about 15 minutes. She then cried and screamed for a long time. There was a personality change after this time. She became depressed, was afraid to be alone, showed less interest in the house and tried less to dominate her other sisters. This condition became progressively worse. In October she was crying a great deal, said her stomach hurt, wanted to stay in bed, could not sleep, was restless. She made attempts to do housework and improved slightly in the latter part of October, but again slumped. She spoke of suicide and seemed quite agitated and apprenhensive.

She was admitted to the Boston Psychopathic Hospital November 6, 1929. At that time it was noticed there was a coarse tremor of her right hand, and hyperactive knee jerks. She did not recognize odors. Physical examination was otherwise negative. Mentally the patient was quiet and depressed. She

cried at times, spoke little spontaneously. She said that she felt unable to do anything, she could not eat nor stand the smell of food. No delusions or hallucinations were elicited. The intellectual functions seemed to be quite limited, but were probably intact. The patient improved greatly while in hospital. The agitation disappeared entirely and she seemed more cheerful. She felt that she was able to go home and on November 12, 1929, she was discharged against advice to relatives.

Upon going home the patient was at first cheerful, helped with the housework and seemed to be doing quite well. Her appetite was good. About December 10 she started crying, she became gradually restless and her appetite became very poor so that she was re-admitted to the hospital. She felt that people were looking at her. She was quite apprehensive and said she felt afraid, but was not clear as to what it was that frightened her. She was in good contact with her surroundings. Her memory seemed less accurate than on first admission.

The physical examination showed that she was a well developed and well nourished woman. She did not recognize test odors. Pupils were slightly sluggish to light, but reacted promptly to accommodation. There was a slight weakness of the lower left side of the face. The deep reflexes were hyperactive but equal. There was a coarse tremor of outstretched hands. Blood pressure was 124/86. Pulse rate was 116. The urine was negative except for a slight trace of albumen, and many white cells. The blood examination showed 80 per cent hemoglobin, W. B. C. 9000. The blood Wassermann and vaginal smears were negative. Blood non-protein nitrogen was 31.4; uric acid 37; cholesterol 184; fasting sugar 114. The blood sugar curve showed a high rise at the end of one hour, being 196, but had dropped to 134 at the end of the second hour. X-ray of the skull was negative. Basal metabolism and galactose tolerance could not be done for lack of coöperation.

She was given intramuscular injections of 40 units of amniotin daily. Treatment started January 16 and continued until February 16, a period of 31 days. During this time she continued markedly agitated most of the time. She would not answer questions or carry on a conversation, but walked about moaning. Following treatment there was no important change in the blood chemistry. The blood pressure was 118/82.

She was discharged on February 20, 1930, to the Danvers State Hospital. There it was reported that she continued to be agitated and depressed, with ideas of unworthiness. She was in fair contact with her surroundings. Her mental condition continued unchanged, but in January, 1931, it was noted that she was having vaginal hemorrhages, and an examination revealed a fully developed carcinoma of the cervix with metastasis of the other pelvic organs. The case was considered inoperable, and she was kept under the influence of morphine and died on March 21, 1931.

This case illustrates a not infrequent occurrence. We have a number of cases where the mental picture was that of a typical involutional melancholia and where carcinoma developed within a

year after the onset of the mental symptoms. It is possible that such a relationship is purely accidental, but it does emphasize the necessity of a careful physical study.

SUMMARY.

Seven cases of involutional melancholia were treated with ovarian hormone in the form of Squibb's amniotin. The method and amount of treatment varied. A careful study before and after treatment was made of the blood pressure, basal metabolism, blood chemistry, (including non-protein nitrogen, uric acid, cholesterol, fasting sugar and sugar curve), and the galactose tolerance.

Two cases showed a good social recovery (Cases 1 and 5). Three cases were unimproved and now show a chronic picture (Cases 2, 3 and 6). Keeping in mind Dreyfus' findings, it is still possible that recovery may occur, but if it should, the amniotin treatment could not be regarded as playing any part in the recovery. Two cases died, Case 4 of anemia and broncho-pneumonia, Case 5 of carcinoma of the uterus. Our treatment, therefore, appears to have had little or no effect on the final outcome of these cases.

In giving amniotin, we had in mind the possible restoration of the menstrual cycle. The results were quite different. Except in Case 1, where a very slight flow occurred on two occasions, the effect of treatment was to cause complete cessation of the menses. In Cases 3, 4 and 5, there was menstruation up to the time of treatment, but none after treatment started. In Case 2, menstruation continued for two months after treatment and then ceased. Case 6 had had a pan-hysterectomy so that no changes were possible. Case 7 had had the menopause 11 years previously and treatment produced no effect.

Very little change occurred in the blood chemistry during treatment. Where such changes did occur they were usually in the direction of a more normal condition. However, some cases did show disturbances in weight, arterial tension, an increase in non-protein nitrogen not due to any apparent cardio-renal-vascular disease, a low blood cholesterol, disturbances in sugar curves, and low basal metabolism. These may all be favorably influenced by glandular therapy, especially the specific female sex hormone. Such therapeutic measures may improve the patient's general physical condition, alleviate distressing symptoms, remove ab-

normal sensations which may be feeding delusional trends, shorten remissions, and in some instances are apparently associated with complete clinical recoveries.

An intelligent application of such therapeutic measures specifically directed against known symptoms and laboratory findings may offer a valuable means of treating properly selected cases. Patients who show depression, indecision, delusional trends directed against the environment, and without visceral disturbances and their associated hypochondriacal trends, will probably not be benefited by such treatment. Reëstablishment of menses should not be the aim. On the other hand, it may be possible to hasten a complete cessation of menses where the disturbance includes an annoying continuance of scanty, irregular menses or metrorrhagia of the menopause not due to uterine pathology. The combination of the sex hormone with other forms of organotherapy, especially with thyroid in cases of low metabolism, and with pituitary, obviously suggests itself.

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DISCUSSION.

DR. G. H. ASHLEY (Denver, Colo.).—Dr. Bowman has given an unusually interesting paper and I want to mention one point. We should realize that it is not known exactly what there is in amniotin or any other ovarian extract that acts therapeutically. Has treatment with other forms of ovarian extract proved beneficial to patients who have not improved mentally or physically with one type of extract? In my practice, some patients seem to react more favorably to a different make of extract than to their former treatment and I feel that the chemistry of our various products is not definitely enough known for us to understand why we receive favorable results from one product in one case and not in the next, but by changing the type of treatment some unfavorable cases react beneficially to the change of products.

DR. C. NEYMANN (Chicago, Ill.).—We have used amniotin and other ovarian extracts in the treatment of involutional melancholia. Negative results were obtained in the types generally encountered in private practice. In some instances, however, we believe that there may have been favorable results. The schizophrenic types of involutional psychoses seem inclined to yield to this form of treatment especially whenever delusions predominate. I would like to ask Dr. Bowman whether he has employed amniotin in such cases.

DR. BOWMAN.—I have tried amniotin in a number of different types of mental reactions. There have been some early cases of schizophrenia in young girls of 15 to 18 where there has been apparent lack of ovarian function. In many of these cases we secured good results by the use of

pluri-glandular extracts, commonly using thyroid and pituitary extract to supplement the amniotin. In some of these cases the menstrual cycle was restored apparently as the result of this medication. There was much more question as to what effect was produced on the mental symptoms, and I do not feel that I am justified in making any positive statement. However, there was never any mental upset which would appear to be the result of a glandular feeding. With regard to late cases of schizophrenia occurring at the involutional period, we have treated a number of such cases but they were purposely omitted from this series as we were reporting only the involutional melancholias. In only one case did we get any definite improvement, although some cases were treated over a period of a number of months.

Dr. Ashley has stated that we do not know exactly what we are giving when we give amniotin as there is still some question as to whether there are several active principles in the ovarian secretion, and we cannot be sure that in giving amniotin we are replacing the normal ovarian secretion. This is undoubtedly true. We have tried the ovarian extracts of other drug firms in other cases, but in carrying out this research it seemed logical to stick to one preparation of ovarian extract and not give any other type of ovarian extract.

MENTAL REACTIONS AT THE CLIMACTERIUM.*

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In the consideration of mental illness associated with the menopause, reference is often made to involution melancholia. But this is not the only reaction of the period; any of the functional psychoses may become apparent at this time, including schizophrenia, paranoic conditions, manic-depressive psychoses, the psychoneuroses and a number of border line states. Likewise, one cannot neglect early senile and arteriosclerotic pictures.

If we limit our discussion to the cases of women showing psychic-somatic symptoms ordinarily pigeon-holed in the group of involution melancholias, we do not thereby deny that analogous factors, in part at least, may be at work in the others.

Involution melancholia has existed throughout the ages. It is a condition accepted as inevitable in a small percentage of people. The general practitioner is familiar with the melancholic reactions of the involution period, and often sees women with numerous neurotic manifestations, tired feelings, hot flashes, and other sensations associated with the so-called "change of life." Problems in relation to the menopause come up daily in general practice, treatment being commonly carried out in the home. With the psychiatrist, hospital treatment becomes rather constant advice. He insists that time is essential, and especially care with regard to the possibility of suicide.

But is this all we really do with such patients? Do we not by a thorough-going study of somatic and the psychic organization together, taking into account constitutional endowment, life experiences and present epochal factors, endeavor to assess the individual assets and liabilities, which in many cases so easily get out of balance at this critical period.

The climacteric period, as we all know, is one through which most women pass with little difficulty. It begins as a rule between the ages of 40 and 50 and may last from one to five years. The menopause, the actual cessation of the menses, may occur early or

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late, but it does not usually mark the end of the involution process. This particular phenomenon is only part of a complex affair having as important factors disturbances of the glandular, circulatory, nervous and psychic systems.

Maranon, in an interesting treatise, has emphasized the rôle played by the endocrines at this period. He describes the results of deprivation of ovarian hormone due to atrophy of the ovaries. The glands in close functional relationship with the latter inevitably react. The thyroid usually shows a compensatory hyperactivity; likewise the suprarenals. The so-called "hot flashes," flushing of the skin, tachycardia and occasional superficial tremors are explained on this basis. Glycosuria is accounted for by diminution of carbohydrate tolerance through adrenalin influence. He describes a climacteric hypertension, the fundamental character of which is its instability. This is shown in variations of pulse pressure, the diastolic changing little, but the systolic fluctuating rapidly in the presence of digestive disturbances, muscular activity and particularly emotional forces.

Maranon's significant contribution draws attention to the vast field for further investigation which the physiology of this period offers. Each system of the body undoubtedly plays a part in the total reaction of these years, and it is the correlation of these various processes that one must seek to understand in order adequately to appreciate the climacteric problem.

We present here four cases to illustrate some of the features it is necessary to consider in the study of melancholia at the climacterium.

CASE 1.—The patient, a widow aged 54, came to the hospital in a depressed agitated state. The family history was inadequate. Her parents died when the patient, an only child, was very young. She was reared by relatives who babied her excessively. She finished the equivalent of a high school education at the age of 17 and was married two years later. Little was known of her husband except that he continued to treat her as a child, gave her her way in all things, provided many servants and, during the last twelve years of his life, gave her a companion.

Physically she was handicapped by a curvature of the spine. She was considered delicate. She had no children, but three abortions were induced because of pernicious vomiting. At 37 she had an appendectomy and at 43 a hysterectomy, necessitated by bleeding associated with a uterine fibroid. After the hysterectomy headaches, accompanied by anorexia and vomiting, were frequent. Christian Science was said to have helped her over these periods.

Balancing her neurotic traits she had certain assets in her personality. She was intelligent, witty, a good conversationalist, made friends easily and kept them, liked the theatre, and had much interest in her garden. While her husband was near she was usually cheerful and optimistic; when he left her for short periods she became moody and anxious.

Her *mental illness* followed the death of her husband when she was 51 years old. She had to give up her home. She became restless, discontented, unable to concentrate and at times cried and talked of suicide. In an attempt to help her a trip to Europe was planned. She returned in a poorly nourished state and, following a frenzied attempt to kill herself, was sent to a hospital. This was a year after the death of her husband. In the hospital she talked of poison being in her food and of poison gasses coming in her window. She believed she had committed sins for which she would be punished and also heard a male voice calling her vile names. For weeks she was desperate. She gradually improved and seven months after admission was discharged, against advice. She lived with a nurse but continued agitated and tense. Finally she was admitted to Bloomingdale Hospital three years after the death of her husband.

The *physical examination* showed a small-statured woman, of feminine make-up and hair distribution, about 20 pounds underweight. She had a marked scoliosis. Blood pressure was 130/90. Here eyes were rather prominent. Laboratory findings were negative, except for traces of albumin and sugar in the urine. Abdomen showed scars of the appendectomy and hysterectomy.

Her mood was an anxious one. She paced the floor, wringing her hands, whining and bemoaning her fate. For months this attitude continued. At intervals she masturbated openly and attributed this to medicine which stimulated her sexually. She thought no one wanted her, but at the same time continually begged to go home. She was obsessed by obscene words. She worried about the end of the world with God forsaking her. She constantly believed that she would be punished. She had to be urged to eat. She was critical of the nurses, and believed they delighted in torturing her with food, baths and packs. She spoke of her environment as a terrible place. Occasionally she believed her relatives were outside waiting for her, and identified strange cars as belonging to them. Six months after admission little change was noted in her agitated, apprehensive state, but her trend revolved almost exclusively about the agony of separation from her relatives. This continued for many months with episodes when she was very noisy, resistive and antagonistic; all such behavior, however, being in some relation to her tremendous insistence upon leaving the hospital.

Exactly two years after admission the experiment of living outside in an apartment with a companion was tried. She visited the hospital on the second anniversary of her discharge, looked 10 years younger, had gained 40 pounds in weight and was perfectly well. She reviewed her illness frankly, believed it had existed for

about four years and described the abnormal state as a "frightful condition of self-concentration and monumental selfishness." She recalled only vaguely the period before admission when for months she had many sedatives for sleeplessness and tension. Her previous notions of gas and poison were part of the nightmare of that period. She was once more devoted to her religious beliefs and she was in her old home again.

CASE 2.—The patient, a married woman of 55, was admitted in a state of agitation, restlessness, and depression.

The parents were dead. A sister died of pulmonary tuberculosis at 35; a brother committed suicide at 30, following excessive alcoholism. A sister, aged 45, had been psychotic for 20 years.

The patient was the sixth of seven children, three of whom were living. Early life was uneventful. She left grammar school at 14 and thereafter remained at home with her parents until, in her early twenties, they died. Left with considerable means, she traveled about the United States and Europe for a number of years with no fixed interest or responsibility. She was married at 33 to a man whose financial standing was much lower than her own. Two sons were born within four years and the patient settled down as a serious-minded housewife and mother, her interests entirely centered in her home. At 38, following a miscarriage, she had a curettement, and remained well thereafter.

Her menses were established at 14, and continued regular without incident until 50, when, after some irregularity for a year, the menopause occurred.

As a child she was active and lively and particularly interested in athletics. She never learned easily in school. Usually cheerful and optimistic, she never unburdened herself, avoided the risqué, and was sexually frigid. In her home she was "the man of the house." She could drive nails, fix electrical apparatus and handle the furnace. She played poker and bet at the races. She liked golf and was an excellent swimmer.

Present Illness.—At the time of her menopause, five years before admission, her husband was demoted. This resulted in the breaking up of her old home. She was rather anxious and worried about this and began to attend church more frequently. She occasionally complained of not sleeping well but otherwise, until a year before admission, she managed her new home as usual, with one exception. Her strong wish to rear her sons in luxury tempted her to play the stock market more earnestly than wisely and she put much of her money into speculation. The acute phase of her illness began at 54, a year before admission to hospital, when she lost part of this money. About this time her sister-in-law died of cancer. The patient soon became depressed, agitated, and apprehensive; she had headache, backache, her heart jumped; she felt completely exhausted but could not remain quiet and said she had cancer; also that she would soon be like her psychotic sister. She blamed herself for all her troubles and could see no hope for the future. She made

a suicidal attempt with gas, which, at the time, was regarded as an accident. During this period of approximately a year she was taking sedatives practically every night, and for several weeks before coming to the hospital she had a mild paranoid trend directed toward her neighbors, when she called bootleggers and scheming Jews.

Physical examination on admission showed a short, heavy-set woman with a torus of the hard palate. Tonsils were ragged, glands of the neck enlarged. There was a suggestion of masculine hair distribution with profuse hair on the thighs. There were fine tremors about the mouth, also of the extended fingers. Several infected teeth were noted. A red pedunculated mass protruded from the cervix. Blood pressure was 130/72. Laboratory findings were essentially negative.

For the first week, she was confused and noisy, particularly at night. During the day her depressed, agitated condition was more prominent. For a time her memory was poor. A week after admission she had a clear sensorium. However, she was hallucinated and believed that her son was in the hospital and was calling her. She ran about desperately looking for him. She misinterpreted sounds on the hall as a Jewish ceremony or chant for the sins of her family. She was certain something had happened to her husband. Her hallucinations subsided within a month, but for many months thereafter she had episodes when she walked the floor, wrung her hands and kept repeating, "What shall I do?" She spoke of having distressing thoughts and worried about not sleeping. A year after admission she was still emotional and easily irritated. She was careless of her personal appearance. She talked much about her sons and her husband and of how sorrowful she had made their lives.

Nearly three years after admission, when she was apparently resigned to hospital life, she was told of her husband being incapacitated by a stroke. She showed an initial anxiety about this, but within a month was better than at any time previously. She began to talk of caring for him, became more sociable and optimistic, had no fears, and planned definitely for her future. She left the hospital approximately three years after admission and is entirely well. She actually supports the family in comfortable circumstances by means of a miniature golf course which she started soon after leaving the hospital.

CASE 3.—The patient was a married woman of 50. The father, an intemperate man, developed a psychosis and died of cancer. A paternal aunt died of cancer. The mother was strict, rigid, and very unstable. A brother died of myelogenous leukemia. Another brother and a sister committed suicide while depressed at the involution period.

She was the oldest of six children and was born in England but came to this country at the age of 12. There was history of physical disease in childhood. She received a grammar school education. Outside diversions

were tabooed by a dominant mother. She married at 24, and her three sons were born by the time she was 30. Labors were described as easy and uncomplicated. At 35 she became nervous and rundown, complained of abdominal distress, and was found to have moderate prolapse of the uterus with adhesions. She improved after some weeks in bed, but refused to wear the pessary recommended. At 48, two years before admission to hospital, she had several severe uterine hemorrhages. A year before admission her periods ceased.

The outstanding traits in her personality were great stubbornness, persistent economy, and a universal pessimism. She was definitely asocial, skeptical, extremely sensitive, overconscientious and a routinist. There were never any interests outside of her home and she was never satisfied that her servants did the work properly. She was lacking in affection and rarely kissed her children. She had no religious outlets after the first years of married life. She was frigid sexually and accepted her husband passively.

Several factors are evident in the *beginning of her illness.* Following the severe homorrhage mentioned above, she developed a fear of cancer and believed she was soon to die. For a year thereafter she visited numerous physicians complaining of pain in the back, burning urination and vague abdominal discomfort. Eventually a blood examination showed hemoglobin of 40%. She was regarded as a case of pernicious anemia. This was five months before admission. A month later her sister-in-law died suddenly and at this time the patient was definitely depressed. The suicide of a sister was the final straw. She reacted at first with a dull, indifferent state, but within a few weeks was agitated, sleepless, apprehensive and delusional. Three months later she came to the hospital.

Physical examination disclosed a feminine habitus, but her skin was rather dark and there was excessive hair on her chin and upper lip with patches on the inner surface of the calves of both legs. The perineum was lacerated and the cervix low in the vagina with the uterus posterior and firmly fixed. R. b. c. 4,500,000; w. b. c. 17,400; Hg. 88%; polys. 78%. The urine had a high specific gravity and showed a trace of albumin. Blood chemistry and Wassermann were negative. Heart and lungs were negative. For two weeks after admission she ran a temperature approximately 102° F.

At first she was rather confused, extremely agitated and restless. She resisted all attention, had to be tube-fed and retained her excreta. As the toxic condition cleared the more typical picture presented itself. She was clear but very tense and very depressed. She paced the floor, wrung her hands, pulled at her hair and clothing and occasionally pounded herself with her fists. Her trend was nihilistic. She believed her body was dead, that her lungs were gone, that her heart did not beat and that she had no gastro-intestinal tract. At the same time she said she could not die and was in terrible mental agony. Later, feelings of unreality were prominent—there was no world, no family, no God, the grass was not green, etc. Frequently she was noisy, repeating, "Oh, God, Oh, God! this eternal punishment—why can't I die, but I can't die!" etc. A year after admission she was

somewhat less agitated, but her somatic delusions were as prominent as ever. She insisted that she had no blood, that her arms and legs are stone—she had no bodily sensations. Still a year later she was saying, "I'm suffering terribly—I never sleep—I have no resting place—I have no bowels. It's awful to have no place for the food I'm made to eat—I brought this terrible trouble on myself—I'm dead and should be buried!" Some months later she jumped into a small pond with suicidal intent, and stuck her head in the mud and water, which were about 3 inches deep. Shortly after this she insisted her bones had been cut out and asked to be cremated. She gradually became more destructive with her clothing, finally refused all cooperation, was continually tube-fed, and needed constant observation because of her impulsive tendencies.

Throughout, however, she never lost her alertness and contact, and was distressed when arrangements were made for her transfer to another hospital. At the latter institution no change was noted and she died from exhaustion, approximately six years after the onset of her mental illness. A postmortem showed an acute enteritis, slight sclerosis of the aorta, but no other pathology.

CASE 4.—The patient, age 52, single and a school teacher, was admitted to the hospital in an extremely tense, agitated state. The mother died with cancer of the breast. No psychopathies were noted in the family.

The patient was the second of a family of three and was frail and undernourished as a child. She graduated from high school at 16, later obtained a degree from teachers' college and then began teaching. Always a capable teacher, she steadily advanced and eventually became principal of a junior high school. If she had not become ill her salary would have been raised to $7,000 the year before admission to hospital. There is no history of any serious illness throughout her life until recently. Through 20 years of teaching she was absent only six or seven days altogether.

Her menses were established at 11. Periods were without difficulty until a year before admission when they became irregular. The flow was more profuse at this time and she had considerable pelvic distress.

Her personality was rather rigid. An honor student, she was always interested in intellectual pursuits. Her teaching finally became her only satisfaction and to perfect this, she occasionally took a post-graduate course, at which she always worked diligently. She was reserved, never inclined to unburden herself, and never affectionate or demonstrative. Her friendships were limited to women and she had a few very intimate ones. Although a Catholic, her religious outlet was limited to an occasional mass. A tendency to irritability and temper was prominent. Intensely modest and prudish, she was intolerant of the risqué. Later it was discovered that masturbation had been a life-long habit. She always felt superior to the rest of her family and friends and was described as very proud, egotistical and vain. She worked under tension, but never worried unduly.

Her *present illness* was associated with her concern over irregular menstruation. She worried about cancer which had caused the death of her mother three years before, and was also concerned about a similar condition in a friend. One day she discovered a lump in her own breast and immediately believed she was to die. A few days later a diagnosis of cancer was made and she was immediately and successfully operated upon. She reacted cheerfully to this operation, but some weeks later, after X-ray therapy, she was again depressed, anxious and worried. She could not sleep and was apprehensive and tearful. A month before admission she became suspicious and irritable.

Physical examination on admission showed a heavy-set woman, with masculine hair distribution. There was considerable hair on the chin and upper lip. There was a post-operative scar in the right breast region with slight swelling of the right arm. Heart, lungs and abdomen were negative. Blood pressure was 120/80. Laboratory findings were negative except for a moderate amount of sugar in the urine and a blood sugar of 196 mgm./100 cc. (normal 80 to 120).

She was agitated, depressed and very suspicious. She occasionally wrung her hands. There was some irritability and resistiveness. She was careless of her personal appearance. She accused herself of being worldy instead of spiritual. She was a sinner, but could not make her confession such that the Lord could forgive her as he had forgiven the Magdalene. She had not a sound mind and body. She believed her cancer was punishment for her masturbation. She believed she was an idiot and the only patient in the hospital. She read sinister meanings into her routine activities and in her talks with the physician. People ridiculed and laughed at her. She was a disgrace and an object of derision. It was implied that she was sexually intimate with both sexes. She thought she was accused of using indecent words. Occasionally she was tube-fed; believed the food was poisoned and that her bowels had not moved for weeks. She spoke of being tortured, but was never a bad woman and did not deserve it. She mentioned at intervals that she was "crazy." Once she insisted on denying that she had "indecent relations" with her brother. For months she continued without change, except that her persecutory trend resulted in episodes during which she was excited, very resistive and antagonistic. Toward the end of her stay in the hospital she was talking of undergoing the greatest torture in the history of the world, constantly thought of death and believed her soul and body had been taken by the physicians. Her agitation at times was marked and she would pray, "Dear God—Dear God!", but knew He would not help her. She was soon to go to Sing Sing. She gained slowly in weight; her blood sugar gradually became normal; no signs of a recurrent cancer appeared; but she remained uninterested in her personal appearance and begged to be discharged.

Three years after admission she was reported in another hospital as unchanged physically or mentally.

These four cases may be taken as representative of reactions occurring at the climacteric period.

Physical changes alone, though they are more or less profound at this time, do not account for the illness. There is no doubt, however, that the physiological changes bear some relation to the psychic organization. At this time of life our ability to adjust to stress is not so elastic as in former years. Our sense of security may have been won only after much effort and threats to this security are more difficult to withstand. It is not always easy to permit natural changes to lead us gracefully into the later years of life, to give up securities that have meant satisfaction in the past.

The attitude and behavior of such patients is uniformly one of depression, agitation and apprehension. Persistent restlessness, inability to sleep, occasional fretfulness and irritability of varying degree are noted. Suicide is more likely to occur than in any other type of illness and a general indifference to personal appearance and habits is common. These things we all recognize. Referring to our four cases we may now comment more particularly upon: (1) The family background and the patient's personality; (2) the etiological factors; (3) the trend and its prognostic significance; and (4) the relation of each factor, or factors, to the others.

Our first patient was an only child, very passive and dependent, with a tendency to express an emotional inadequacy through physical difficulties. Her social adaptation was successful, however, because her environment and object relationship—a paternal husband—fitted well her earlier established limitations. With her husband's death she promptly showed indications of failing adjustment, but it was only when she left her home six months later that she had to face a reality she had never known before. Even so, the acute psychotic picture was not apparent until she had become physically exhausted by a long European trip. Her trend, as first expressed, contained the usual thoughts of being sinful and of being punished, but she never quite accepted this—an important point in considering prognosis.

Her infantile masturbation was less a conflict to her, because she had never fully developed an adult sexuality. Deeper regression to oral and anal levels, as expressed in her ideas of poisoned food and poisonous gasses, with auditory hallucinations, was evident at one time. This undoubtedly was provoked by her early emaciated toxic state, during which she had much medication. These latter symptoms disappeared as her taxicity subsided.

Eventually her talk referred entirely to the unjust punishment inflicted upon her through separation from her home and friends. Her whole energies were absorbed in this topic to the complete denial of any other interest in or outside the hospital. When we recall that her life had been one in which she had given little and expected much in return, her own description of this narcissistic state was not surprising. As we have noted in her history she said, in restrospect, " It was a frightful condition of self-concentration and monumental selfishness!" This patient recovered *after* she had left the hospital, an environment being provided for her in keeping with her previous life-long habits. A strong religious sublimation also became an important factor in bringing to her a satisfaction and healthfulness in life she had never previously experienced.

The second patient presented an opposite development. She was a woman who had several brothers and sisters. She had to enter into rivalry with them early. She was active and lively, played the games of her brothers and disliked school as they did. She was particularly interested in athletics. In her early twenties, when left considerable means by her parents, she started out to see the world and occupied the years before her marriage at 33 with no fixed interest or responsibility. She was always rugged and strong. She had no physical illness. She did not need a protector, she was proud of her strength and independence. But in the family background were a psychotic brother and sister.

It is significant that she married a man financially below her level, likewise that in her home she leaned to masculine duties, repairing the electric lights, doing odd jobs of carpentry and the like. She played golf, was interested in horse racing and liked poker. If this represented her conscious life, one may surmise that unconsciously a so-called masculine drive existed with all its psychological roots. In her illness, when she feared and later believed something had happened to her husband, one might speculate that this was part of the same conflict. A hint of coming trouble was seen five years before her acute illness began. At that time her husband was demoted, the old home given up, and a new environment substituted. Anxious and worried, the patient found some solace in an increased interest in church and pride in her growing sons. The latter eventually became the object of her life interests.

She wanted her sons to have what she had had, luxury, freedom, aggressiveness. It was this that led to stock market speculations. About this time a sister-in-law died of cancer. Shortly thereafter the patient lost some money in the market and this touched off the play of emotions that terminated in her illness. For a year before admission she continued hypochondriacal, thought she had cancer, was agitated and hopeless. Nightly throughout this period she was taking sedatives for the sleep that would not come. A mild paranoid trend and later a confused delirium-like state, present on admission, were probably the result of this long period of medication. It is interesting that her stationary level in the hospital changed when her husband actually became an invalid. This was an incentive for her to return to the rôle of protector and provider. In fact her husband in reporting her recovery after she had left the hospital quoted her as referring to her two children and himself as her " three sons ! "

The third patient is somewhat different. Though hereditary forces still play an uncertain rôle, it seems impossible that she entered life without some inherent weakness. The father, excessively alcoholic, was psychotic and died with a cancer. A paternal aunt also had a cancer. A brother had something akin to this; he died of myelogenous leukemia. Another brother and a sister committed suicide while depressed at the involution period. When to such a diathesis is added a strict, rigid and unstable mother who prevented her children having any diversions or interests outside the immediate home life, who tabooed any social contacts because of the dangers attached thereto, who took her children out of school when the grammar grades were completed for the same reason, it is evident that life was going to be serious for these children. Our patient eventually escaped, however, and was married at 24. But she carried over into her new life a stubbornness, a sensitiveness, as a social skeptical personality, which, after a few years, was much like her mother's before her.

This patient showed a closer correlation of precipitating factors to the actual menopausal change, plus a known family tendency. In other words, when she had severe uterine hemorrhages her prompt fear of cancer was a logical attitude. Her hypochondriacal reaction then followed, but the numerous physicians who saw her

let this color the picture too much. Accordingly, when she needed the maximum of physical reserve to combat the pressure of a general psychic-somatic breakdown, she was allowed to become physically depleted; when her blood was eventually examined a hemoglobin of 40 per cent was found and she was diagnosed as a case of pernicious anæmia. Finally, the death of a sister-in-law and the suicide of her own sister imposed upon a constitution, already compromised, too great a stress; the psychosis was then inevitable.

On admission she was toxic and severely reduced physically; but which her physical condition improved her morbid trend persisted. Most striking were the very severe hypochondriacal and nihilistic notions. She believed she had no heart, no lungs, no bowels, that her body was dead. Nevertheless, she could not die, she was to suffer eternal punishment; there was no God, there was no life. Such a trend, as noted by others, is usually of grave prognostic import. One wonders though if here early physical depletion did not exhaust what limited potentialities for recovery she might have had. Her personality, however, was not an open one and her regression, as indicated by her hypochondria, corresponded well with her early tendencies. She did not recover.

Our fourth case was still different. Her father was drowned when she was small and, though a frail child, she was raised by her mother without complications. She never married, her life energies being concentrated in intellectual pursuits and she became an extremely capable teacher. Modest, prudish, with a rigid conscience, reserved and undemonstrative, her teaching finally became her only interest. Such a personality rarely bends and when its rigidity is threatened by forces either within or without, serious difficulties may ensue. The onset of her illness, as in our third case, was associated with fears about menstrual irregularities. Her fear of cancer, from which her mother and a close friend had died in recent years, the actual discovery of her own cancer and, finally, the operation, created a situation she could not manage. This woman, a successful teacher for years, with only a few days absence from her work in all that time, suddenly found this fixed outlet taken away from her. The regression that followed turned loose instinctive conflicts which never had been resolved. She had never reached a heterosexual level and her teaching was her only sublimation. Masturbation was a life-long habit, and her only intimate friends were

women. It was in keeping that infantile sexuality should be expressed in her delusions—incest with her brother, for instance. The mechanism of projection, so prominent in this case, is always an ominous prognostic sign. One might add that her personality was one often found in schizophrenia. She did not recover. And it is such cases that prompt the belief that some melancholias belong to the schizophrenic group.

These histories represent the longitudinal sections of four individual lives. They came to us for psychiatric treatment long after the development of serious mental trouble. In retrospect, one recognizes the various factors entering into the final condition.

Admitting that certain constitutional forces, not understood, play a more or less important part, we still feel that much can be done to ameliorate these processes. The mental hygiene of the family as a group, a better understanding of personality, and particularly its roots in childhood, the recognition of potentialities for or against the development of serious conflicts at the so-called "critical age," are all problems of importance.

Generally speaking, the therapy for a frank case of melancholia is best managed in a hospital; although certain patients may be treated satisfactorily at home. Many women at the climacterium seek the advice of physicians; such patients are met with in the psychiatric out-patient departments of general hospitals. Certainly the borderline group and a number of early involutional psychoses are amenable to therapy.

We have to consider both the physical and psychological factors. The physical condition is very important. It is a time of aging with decrease in resistive power, and a period when a number of latent pathological conditions are prone to appear. A thorough physical examination often reveals foci of infection and pathology of various systems of the body. Of particular importance is a gynecological study. Irregularity of the menses or variation of any kind in the menstrual function should be carefully checked. The physiological changes due to ovarian atrophy add their symptoms to the general picture. One cannot be too dogmatic in regard to ovarian therapy, but a certain number of cases have been helped by administration of ovarian substance. In this connection Maranon's treatise may again be mentioned.

The excessive use of sedatives or opiates is contraindicated. When one realizes that we are dealing with a condition that usually lasts for many months, even years, it is folly to constantly prescribe hypnotics. Our first two cases showed the effect of this in their acute toxic states. Warm baths, warms packs, elimination of toxic features, regulated exercise, diet and healthy mental contacts are important at the beginning of treatment. It is necessary to establish first a satisfactory physical and nutritional level upon which to build.

On the mental side, a physician, who has the confidence of his patient, may do much by a careful review of her history and a frank discussion of physiological and psychological forces at work. So often these patients live a one track existence; there are no diversified interests. Interruptions or serious variation in the lives of such people are not easily accepted. This has to be borne in mind in early prophylactic therapy. Likewise the possibility of suicide has constantly to be considered.

Once the patient has been admitted to a mental hospital the treatment involves not only the procedures mentioned above, but also a systematized effort to direct her interests into socialized and group activities. After all, the involution patient has really given up life; every interest, feeling, and belief centers in herself. The regulated schedule of the hospital, including occupational therapy, gymnasium and outdoor activities, entertainments, such as dances, concerts, moving pictures and the like, provides a stimulus to return to normal living.

From the psychotherapeutic standpoint we have already pointed out the necessity of a detailed study of the patient's life history. In this way we gain an understanding of the total resources of the individual which in turn must be correlated and strengthened. Although a psychoanalytic technique is not applicable in such cases, the dynamics and psychology of the process are best understood through appreciation of its principles.

Specific treatment for the restlessness, anxiety and sleeplessness include warm continuous baths, wet packs and other forms of hydrotherapy. In this connection it is interesting to quote from a letter written in 1811 by Samuel Tuke of the York Retreat to the Governors of the New York Hospital. Answering a request for

advice he said, " The warm bath has been much used at the Retreat for several years in all cases of melancholia with the happiest effects! "

The use of sedatives is limited. They may be given for short periods but mean little if continued indefienitely, except to lower the patient's resistence. As already mentioned the course of the illness is usually very prolonged. The question of suicide complicates the question of a patient's discharge from the hospital before she is well. But some patients, once a certain convalescent level is reached, change little unless permitted to leave the hospital. Our first two cases are good examples of this. Samuel Tuke also mentions this point. " Close confinement at York Retreat of melancholic and ' hipocondriac ' cases is of all things most unsuitable," and he adds, " few cases of melancholy are cured in asylums in general." To-day we hear the same thing. MacCurdy in 1921 said, " It seems a rare event for a melancholic patient to recover fully while still in the hospital. The return to complete normality occurs at home in the patient's normal environment."

Our conclusion is brief. Involution melancholia is probably not a complete clinical entity in itself. The life history of the patient, including family tendencies, physical constitution, personality and psychic forces all have an influence. The period of the menopause with its physiological changes forms the background for the play of these several factors. Any type of boderline or frank mental disease may appear at this time. We are hopeful that with further understanding this particular period can be made less critical.

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PARANOID REACTION

Occurring in Women of Middle Age.*

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When one has been attending clinical conferences in our large admitting hospitals for a number of years, has seen several hundred or even several thousand new patients in these conferences and heard the life history and clinical examination of each patient, it is perhaps not surprising that from time to time one feels that the particular case being discussed is a replica of certain other cases one has seen in so far as the personality of the patient, the life history and the clinical symptoms may be considered. If a certain number of patients have many points in common, so that the description of one may, with minor variations, be a description of the entire group, one cannot escape the conclusion that the etiological factors should also be common to the group.

If we compare the patients in this group with the patients of another group, we may find certain symptoms or conditions common to both, but one or more features in one group not found in the other. We are perhaps fortified in the conclusion then that the special symptom complex in the former must be due to a special etiological agent not effective in the latter group.

Thus, in the organic brain diseases, it was long recognized that general paresis, arteriosclerotic psychoses and senile psychoses had many symptoms in common; but there were points of difference which warranted the assumption that there must be special etiological factors for each group, as well as common factors applicable to all. These special factors have been found in the spirochete and special types of arterial and brain degeneration.

Similarly, in the intoxication group there may be symptoms common to all acute intoxications, such as delirium, motor restless-

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ness and hallucinations, chiefly visual; but there is sufficient difference between delirium tremens and an infectious psychosis to look upon them as clinical entities, and while both have in common the poisoning of higher centers, there is the special toxin of alcohol in the one case, and in the other, perhaps a streptococcic septicæmia.

Coming to the "reaction to environment" group, also known as the constitutional group or the psychogenic group, the same principle should apply. Most psychiatrists will probably agree that in the manic-depressive psychosis, schizophrenia, paranoid condition, and the neuroses and psychoneuroses, there are certain common clinical features, such as disordered affect, and unreliable conduct with relatively clear sensorium. They will perhaps agree that there are certain common etiological factors, such as a special type of constitution, personal inadequacies, and an environmental setting, which is uncongenial to the patient. Individual psychiatrists may vary the emphasis, but most will agree that these three are at least common to all reactions in this group. Variations in the type of constitution, the factor of our individual ancestry, the way our personality has been strengthened or damaged by developmental factors, psychic or other traumata, and the nature and severity of present unfavorable environmental influences—all these, with factors not common to all, can be considered as responsible for the individual variations of the sub-divisions in this major group.

Paranoid reactions are frequently encountered running through the paranoid personalities, manic states and schizophrenia to the "paranoic states" and "true" paranoia, as well as in chronic alcoholism, and at times in general paresis, and senile dementia. We find it difficult to apply the psychoanalytic interpretation of paranoia to all of these paranoid reactions, and perhaps the psychoanalytic school does not mean that it should be applied. It is perhaps too wide a generalization to say that all paranoid reactions are on the basis of conflict against homosexuality, and on a basis of narcissism. This may apply to young paranoid schizophrenics, but even in these cases it cannot be accepted as a full explanation of the reaction. We are ready to believe that persecutory delusions must have some common factor, but we think this to be rather a defense reaction against fears—fears of the result of the conflict against homosexuality perhaps, but also fears of loss of potency, fears of one's own inferiorities, fears of conscience. In these and

in other fear states, the tendency is to withdraw from danger, and to stand on guard against whatever may injure our *amour propre*, to be ready to protect our own interests, even to the extent of attacking whatever force or forces there may be of which we stand in fear. This mechanism is seen as a normal accompaniment of our civilization in its international relations, leading each nation to fear the other because of possible injuries the other may inflict on it, and resulting in the building of armies to relieve the sense of fear, even as the paranoiac arms himself against his supposed enemies. Both the national and individual reactions so often lead to a war of aggression, for "purpose of defense" only.

In all cases of mental disease it is necessary that we should know all the causes which are responsible for the reaction. The two chief reasons for ascertaining the etiology are: first, for the intelligent treatment of the patient, for by removing such causes as are amenable to treatment, we lighten the load the patient is carrying, and make him more able to cope with his environment, whatever it may be; and secondly, if the future of our work lies in the prevention of mental disease, it is imperative that we know well the things that make for mental ill health, so that we can tell others of the things to avoid if they wish to enjoy good mental health.

The present investigation began some eight years ago with the study of a woman, aged 50 years. On admission to the hospital the informants stated that for eight or ten years she had been hostile to her husband in a negative way, by avoiding him at all times, refusing to speak with him or eat at the same table, and if confronted by him was apt to become angry, to accuse him of infidelity, and of trying to harm her. She had also developed the idea that people passing the house could see into her room, and could know everything she did. Her conduct with friends who might call was entirely normal. No etiological factors were known by the informants. Her life history indicated an extremely insidious onset and development of her psychosis, so that several years passed before the family felt that her symptoms were definitely psychopathic, and several more years elapsed before treatment in a mental hospital was advised.

On admission she was found to be a pleasant appearing woman, neat in her dress, quiet in her conversation, which was entirely normal in content until her family life was discussed. She was

moderately reserved, but not unfriendly with staff or patients, and was willing to cooperate in any way, although protesting that there was no reason for her being in a mental hospital.

On examination, it was learned that when she was pregnant with her fourth child, her husband was thrown out of work as a result of an injury to his arm, and the economic situation became threatening. With her husband consenting, and perhaps urging, she visited an abortionist, and the pregnancy was terminated by him. She states that she knew this was wrong, and regretted it immediately, more so as the economic situation soon improved, and her husband was able to secure work as janitor of a large church, which position he has held to the present time. Her symptoms began within a year after this incident.

The patient stated she had never told anyone of this incident, although her husband was of course aware of it. He had never attributed any great importance to it in relation to the psychosis.

From the study of the various factors in this case, we came to the tentative conclusion that the particular reaction was due to an overt act, irrevocable, and which was contrary to the dictates of her training, and her own conscience. The well-known projection mechanism was employed to put the blame for her sin (as she regarded the abortion) on her husband who concurred in it, and perhaps even urged it. She thus saved her self-respect at the expense of her mental integrity.

The other cases reported in this study showed very similar clinical features. In all cases the symptoms were stated to have existed for years, and the onset and development had been so gradual as to make it difficult to state when normalcy ended, and abnormalcy began. In all cases we were dealing with women in the fifth or sixth decade of life when they were brought to the hospital. They were usually friendly in a mild way, expression and conduct showed nothing grossly abnormal, conversation excellent and revealing no mental disorder until the life of the patient was discussed. In all cases the patient had been a highly respected member of the community, and one whose moral integrity had never been questioned.

Further points of interest noticed in the majority of these cases are that all the members of the group are married or widowed, that practically all cases seem to be associated with the menopause, that

the personality is well preserved in all cases, that the delusions of persecution are especially marked against the husband. With one exception, the patients were all in robust physical health, and finally, so far as we know, there have been no recoveries in this group.

In some cases it was exceedingly difficult to draw from the patient any admission of an indiscretion of such a nature as to come in conflict with her conscience. In at least one instance (Case 4) no overt act was admitted but throughout her married life, which had been extremely unsatisfactory and barren to the patient, she at times had allowed her fantasy to rove, and imagined alliances of a more satisfactory nature with other men; but at each such occurrence her conscience would torment her with the wickedness of such thoughts, and she would repress them, and compensate by more strenuous activities in church work.

Because of this case, and one or two like it, we were forced to modify our original conclusion that this particular reaction was due to an overt act contrary to the ethical principles of the patient, the modification being that the act might be either overt or imagined, and if imagined, was as real to the patient as if it had been committed.

It is perhaps an important part of the mechanism that the original indiscretion or sin, as the patient would regard it, was not dealt with as one might expect an orthodox, conscientious fundamentalist to have dealt with it, namely by confession and repentance and prayers to God for forgiveness, but rather by refusing to admit that she could be guilty of such a sin, and holding that she was not to blame for such thoughts or conduct as had actually occurred.

The following abstracts of case records are indicative of the group of women showing the particular symptom complex, and the particular factor assumed to be specific for the group.

CASE 1.—C. M., a married woman, 45 years of age, in good physical health, but beginning the menopause, has shown symptoms for the past seven years. Although still capable of continuing her housework until admission to the hospital, she has been suspicious of her husband and neighbors and quite irritable. Suspiciousness, dislikes, and accusations have become more prominent; she has slapped her husband on several occasions and has complained of ghosts or someone in the house attacking her nerves. She states that she lived with a "bad man" in Europe.

After four and a half months in hospital the patient returned home on probation. She continued to be interested in her home, but when heard of

six months after leaving hospital, she was still suspicious and very fault finding, apparently showing little change in her mental attitude.

CASE 2.—A. R. W., a married woman, 46 years of age, spent a number of months prior to her marriage acting as a practical nurse at the Children's Hospital that she might be prepared to care properly for the children she hoped to have. She had three miscarriages and one living child, which died a few hours after birth. Hysterectomy was done six years ago, ruling out the possibility of her ever realizing the greatest desire of her life, a family.

Four years ago she began to be suspicious of others, imagined that anyone who smiled at her had something against her, and that the members of the church and Masonic Order were also against her. People talked about her and said she had seduced the minister and the baker, and this talk has injured her character. The minister has "put her through" a lawsuit, and the Eastern Star are circulating stories about her. A letter came to her three years ago telling her that she was no longer wanted in the church. This letter was later stolen, so that she could not use it in a lawsuit against those who sent it. It is the church and lodges which have kept it up all these years, she says. "I got wise to everything from my husband trying to draw me out after he would come home from lodge meetings. He would never discuss the letter frankly, but would say such things as, 'Perhaps you had a baby before you were married to me'; or, 'Were you ever in jail before I met you?'" Recently she has believed that her husband is largely responsible and has turned on him several times.

The patient has a well-preserved personality, is pleasant and coöperative, and of good appearance; unless her delusions are touched upon, her conversation is normal. Her chief desire in life has been to have children, but miscarriages and hysterectomy have prevented her realizing this. Her disappointment made her blame herself, but now she has projected this blame into her environment, and has become suspicious of others.

CASE 3.—M. H., a married woman, 43 years of age, has had 11 pregnancies and is now beginning to have irregular menstrual periods. She is a big, strong woman of pyknic type, who appears to have adopted a rather pitying air of tolerance toward her husband. She has no complaint whatever to make of him, but from a protracted conversation one gathers that she is slightly contemptuous in her attitude, and feels that he is a "bit slow." She is apparently a woman of vigorous sexual endowment, and her imagination has probably been fed with a considerable amount of chaff and coarse conversation.

She reports that she has been engaged in letting off steam for eight years by letter writing. These letters replaced verbal encounters with her family, and were confined to them until two years ago, when she began to write letters to men, making grave charges of immorality against their wives, especially singling out a railway man who lived near her. This man, she says, has been dropping into her house, on any sort of pretext, about twice a week for a couple of years, always choosing a time when her husband was away.

He would make coarse jokes and advances to her, saying that his second wife had never satisfied him sexually, and asking the patient when she was going to allow him some consolation to compensate for his wife's frigidity. She asserts that she always told him he need not look to her for recreation, but she knows that some of her neighbors think that her youngest child looks like this man, and they have insinuated that he might be the father of the child.

Positive evidence of hallucinations is difficult to elicit. However, the patient states that the week before admission was just like the reign of terror during the rebellion in Russia. She claims that a detective of the C. P. R. came to her house, and got a signed statement from her regarding the letters she had written. She "heard them say" this man got two hundred dollars for disgracing her. He spread the news among all the train men. She also claims this detective made improper remarks to her.

There has been apparently a marked conflict. The woman is evidently endowed with remarkable sexual appetite that has not been fully satisfied by her husband, and although he has managed to keep her fairly well occupied, she speaks of him in rather a contemptuous tone, looks upon him as a trying, well-intentioned individual, but a poor sort of thing after all. Her imagination has apparently been stimulated by suggestive jokes and conversations. Humorous remarks about railway men and railway men's wives are as frequent as the filthy stories about travelling salesmen. One gathers that the patient has attributed her own guilty desires to another woman, the wife of a railway engineer, and has credited this woman with having obtained that which the patient herself has wished for, but has not had the courage to secure.

The patient had a well-preserved personality and was in remarkably good physical health. After two months in the hospital she was allowed to go home and is apparently getting on nicely.

CASE 4.—A. L. S., a married woman, 42 years of age, two years past the menopause; showed mental symptoms at its onset four years ago, following the death of her son, whom she had nursed for six months. She had both auditory and visual hallucinations. Her condition has been progressive and symptoms have increased in the past two years.

She married her husband because urged to do so by her family, but feels now that a local school teacher wished to marry her, but had not the courage to ask her. She also speaks of many men wishing to marry her. A doctor, 16 years ago, wanted her to have intercourse with him daily, as he felt she was too good for her husband and could have any man she wanted. She claims this doctor also told her that her husband had been having intercourse with her daughter, a home girl, and also a neighbor woman, who she now declares has been putting "dope" in the butter, at the instigation of her husband, with the hope of poisoning her. She also tells a story of a proposal of marriage by a handsome, single young man, who later had her anæsthetized and violated her, with a resulting pregnancy. This pregnancy was ter-

minated by an illegal operation under anæsthetic, performed by her married daughter and her son-in-law.

For two years the patient has been suspicious that her husband and daughter were trying to poison her. She has left home because she feared attempts on her life; is depressed and suspicious at times, and three months ago heard angels' voices telling her she was a good woman. She has been writing many letters to such prominent persons as the Attorney General and Crown Attorney. She would lock her bedroom door at night, and just before admission would not stay at home because she feared she would be poisoned. She also told the family that she suffered excessive sexual desire, because several physicians were providing drugs to increase this desire.

The patient is a good looking little woman, who keeps herself neatly dressed and is well satisfied with her own appearance. There is marked oral tension. She is anxious to talk and speaks rapidly with great circumstantiality, the words tumbling out in bunches. Her emotional reaction is not in keeping with the terrible wrongs she claims she has suffered. Eagerly she tells of the sexual outrages she has endured, of the sexual demands made upon her by her brute of a husband, of the many offers of marriage that she has had in the past few years, and of the many men who have desired to possess her. Neither sorrow nor anger is expressed. She speaks in an aggrieved manner of her husband's treatment and of herself as the long-suffering woman who is above all reproach. Her personality is well preserved.

As etiology, we apparently have the following:

1. The menopause occurred at a time when the patient was overworked and worried, due to the long drawn-out illness of her son.

2. Her sexual relations with her husband have never been altogether satisfactory. The husband made frequent demands upon her, but probably from ignorance did not attempt to arouse her desires for the sexual act and performed it so hastily that the patient was left unsatisfied.

3. The patient is now 52 years of age; her sexual life is over, and her husband still continues active. It is her own desire to continue active sexual life, but her whole training has taught her that refined women shrink from sexual advances, rather than desire them. She is therefore placing the blame for her craving on her husband and on other men. She has probably never actually had extra-marital relationships, but apparently she has desired them, owing to the fact that her husband did not take pains to satisfy her. She is now fulfilling her desire in delusions of being forcibly ravished and being compelled to submit.

The following dream, which she related as occurring some time ago, made a great impression on her, and is rather significant:

She dreamt there was a scarcity of meat in the land; she then thought she had to kill her oldest daughter to obtain food. She killed this daughter, and then wakened crying.

Interpretation: "There was a scarcity of meat in the land"—the word "meat" used colloquially in rural districts is a well known sexual symbol.

"The patient thought she would have to kill her eldest daughter in order to provide food for the family." The killing of the daughter was a wish fulfillment, arising out of jealousy of the father-daughter relation. The conventional remorse following the killing of her daughter wakened her from her dream.

A second dream was as follows:

She thought she was out in her own back yard; she saw a witch coming up to her, carrying a bunch of feathers in her outstretched hand. If these feathers touched her she felt that the witch would gain absolute control over her. Although she was terrified, her feet were leaden, and she could not run. She wakened perspiring and frightened.

The witch coming up with outstretched hand containing the bunch of feathers might be taken to signify the male genital organ. The patient felt that if she came in touch with these, that is, if she gave away to her desire to have extra-marital relationships, she would lose control of herself completely. She was afraid, and yet her feet were leaden, and she could not take steps to avoid this experience, that is, she desired extra-marital sexual experiences, but could not make up her mind to make the break. She was both afraid of the experience that might come, and yet unwilling to give up the prospect. In her perplexity she wakened.

CASE 5.—K. C., a married woman, 65 years of age, whose menopause occurred 20 years ago, has shown gradually increasing mental symptoms for the past 14 years. She has become extremely irritable, threatening and suspicious of her husband and of people calling at her house or passing on the street, and imagines people are discussing her unfavorably. Formerly an ardent church goer, she now does not go, and talks of the church, her husband, and her neighbors persecuting her. Hallucinations were at first strenuously denied, but later she inadvertently admitted she heard them, the church members, and neighbors say, "Mrs. ——— (her own name) with emphasis on the Mrs., and as if they wanted to take it away. The United Church placed people in the other half of the duplex house to interfere, and these people tried to force her and her husband to perform the sexual act, and later tried to come between them, so that the husband could have the young woman pianist of the church orchestra, in which he was a violinist. Two Catholic girls next door showed they were on her husband's side by carrying baskets of dirt about their garden, and these same girls would finish her if they could by giving her to a Catholic priest for immoral purposes. Orangemen walked up the other side of the street to show the Catholics they were not all-important.

The patient feels that her husband has been kept young by his young musical associates while she has aged raising her family and staying constantly at home. She compares herself to a worn out old horse not receiving the respect and care due such an animal. She dwells on her husband's immoral life before marriage, and says that at one time she would not sleep with him because she thought him immoral with other women. He was always too fond of going off with other women, and he was always too fond of "that sort of thing," meaning the sexual act.

CASE 6.—R. H., a married woman, 58 years of age, who began to show paranoidal delusions and marked homicidal tendencies at the time of the menopause five years ago, had thought she was being doped and blamed her family. She has terrible delusions that all the members of the family have gone astray, that she must murder them to save their souls, and she has made frequent attempts on their lives. When her youngest daughter left home to take a new position, the patient was convinced that she was sent away by the town because she was pregnant by her father, and on her return, her mother beat her so badly with a stick that she was only saved from serious injury by her brother carrying her out of the house. This was only allowed by the patient when her son had promised to string his father to the telegraph wires. She says, "If I kill, I kill to rule my house right." She also says, "I frequently heard my husband say that he would put an extra dose of poison in my tea. My sister says these are all imaginations, but I know they are not—things like that happen. I was going to take a knife once to one of my girls, for I would rather see her dead than in sin. They call me the Virgin Mary, and say all I need is a veil. The voices also say I married 'father' (her husband)."

The patient has delusions of persecution by Catholics. A priest shot at her from the back yard all one morning and afternoon. She did not see him or hear the shots, but she was sure he was there. The voices told her to "kick the child," and she kicked her granddaughter who was on the floor at the time. She feels sure this child is illegitimate.

The patient is in good physical health, except for a varicose ulcer. In hospital she is a pleasant, mild mannered little woman, who smiles readily, and has a twinkle in her eye. She is friendly and coöperative, and her conversation is normal until her delusions are touched upon. She speaks of her trouble without showing adequate emotional reaction. She is alert and aware of all that goes on about her. Normally she has been a mild-tempered stay-at-home body, bright and happy; a religious enthusiast of the Plymouth Brethren sect. There may have been moral lapses in her life, but these have not been proved. She says she is happier away from home, as she cannot be there a week without trouble. She will not live in a house of adultery and her family have been repeatedly immoral. Those who are born again cannot live with the unsaved.

CASE 7.—S. A. J., a married woman, 43 years of age, began to show mental symptoms a year ago, following a long illness which terminated in a hysterectomy. She says she would have left her husband years ago, but stayed with him to raise her children properly. She worried because she thought her husband was untrue to her. She became sleepless, talkative, lost weight, and threatened suicide, but never made an attempt. She imagined people, especially her husband and children, wished to do away with her. She says her husband drinks and keeps a house of ill-fame. She would not do her house work, but followed him about. She has made many false statements, and a while ago was brought to court for these wild remarks. She has told

the neighbors that her husband was going to kill her, and claimed she did the work at his gas filling station while he stayed in the back of the garage and drank.

All her delusions are of a persecutory nature. She complains bitterly of her whole family, imagining them leagued against her. Her mother-in-law she especially singled out and listed as keeping a house of ill repute. She imagined her husband tried to make her associate with women of low moral character, and when she refused she received the brunt of his disapproval, and in consequence was brought to the hospital. She accused an aunt, with whom she stayed after her operation, of also keeping a "bad house."

In the hospital, except for some periods when she is somewhat depressed, the patient appears quite normal, until her delusions are inquired into. Possibly the hysterectomy has given her a feeling of inferiority with resulting suspiciousness and ideas of immoral sex conduct in others.

CASE 8.—A. A. B., a married woman, 46 years of age, has shown distinct change in personality for the past seven years, becoming more and more suspicious, thinking the minister preached at her from the pulpit, followed her home, and tapped on her window. She was so upset at the onset that she was in a hospital for five months and returned home unimproved. She has heard the voice of God and imagines that neighbors throw dirt containing germs on her washing. She thinks they also look at her boys and her house, and then face toward Whitby, meaning they consider her children insane. The C. N. R. train whistles warned her that her boys were in danger and she started out to look for them; the Oshawa Street Railway whistles told her which direction to take. She locked up her boys' and husband's clothing so that they could not go out, and sometimes imagined people were in the house.

In the hospital, the patient was pleasant and agreeable, but suspicious of questioning. Her health is good; menstrual periods, formerly regular, are now irregular. She says there has been no sex relations for five years. She admits pre-marital relationship with a man other than her husband.

CASE 9.—L. R., a married woman, 49 years of age, began to show mental symptoms six months ago, following a pelvic operation. She has a well-preserved personality, but imagines that people are talking about her and has become very suspicious of her husband, thinking he has intercourse with many women, even though she, the patient, is still alive.

She says voices keep her awake at night. She imagines that when the window is open all her conversation is heard in Toronto. She also thinks she can read my thoughts, and transfer her replies to me without voicing them. At times she is restless and excited, and has occasionally disappeared for days, and when found would not return home. She admits, quite casually, extra-marital relations with two men.

Physical condition: Poor heart muscle quality, some extra systoles and increased blood pressure.

CASE 10.—G. E. S., a married woman, 49 years of age, had an acute mental upset at the time of her menopause, two years ago. She was noisy, fought shadows on the wall, and had the delusion that something jumped from her foot and went down her throat. She recovered from her acute excitement in two months, but then became seclusive, suspicious, bad-tempered and sullen. She now denies that she was ever married to her husband and says the children are not his, and she also denies pre- or extra-marital relations. She claims that her life has been exceedingly unhappy, and that she never wished to come to, or stay in, Canada. She is hoping the authorities will deport her.

She became careless about her home, and would not light any fires, nor prepare any hot meals. She lay in bed most of the day, getting up only to set the table. During the course of the meal she would sit in another room. Although now she denies hallucinations, while at home she would open a trap door in the ceiling, and shout, "Come down, come down." On occasions she struck her husband, accusing him of setting traps for her in the house. In her opinion everything her husband has ever done is wrong.

Although the patient is in good physical health, she is sullen and antagonistic, answering questions with streams of abuse and with impertinences.

CASE 11.—E. M. F., a widow, 47 years of age, who completed her menopause three years ago, has been quite dissatisfied with life since her husband's death 23 years ago. She was married at 19, and had three children. She has always been of a nagging disposition, and seemed to expect too much of her daughters. About three and a half years ago she became depressed and thought she was to be arrested. She became contrary and very suspicious of everyone, tore up her husband's picture, and threatened suicide by gas and drowning. She said she knew that she and the girls would be arrested because she had been drawn into a conversation and "said things."

Before her father's death she turned against him, and lately has turned against her mother. On occasions she has imagined that her girls were kidnapped. She had a well-preserved personality, and after one month in the hospital returned home on probation. When last heard of she was doing well.

CONCLUSION.

There appears to be a clinical sub-entity in the psychogenic or "reaction to environment" group of psychoses, in which the chief symptoms are persecutory delusions, with or without hallucinations, and without obvious personality or intellectual changes, occurrring in highly moral women, and becoming apparent during the fifth and sixth decades after a long prodromal period, the change from normal to psychopathic being so gradual that relatives have found difficulty in fixing the date of onset and persons who have but slight contact with the patient are not aware that the individual is suffering

from a psychosis. A close study of many cases admitted to our mental hospitals over a period years has convinced us that there is a specific etiological factor, among others common to the group as a whole. This so-called specific factor we believe to be an overt or imagined sinful act on the part of the patient, which is not sinful to the patient, however, as she either projects the blame on others or denies that it would have been consciously desired by her. The situation is thus not dealt with adequately and honestly, and a state of emotional unrest is produced. As a quietus to conscience a persecutory delusional trend is developed slowly and progressively until a well-marked psychosis results.

If our deductions are correct, we feel that mental hygiene instruction to the laity can utilize the concrete suggestion of greater honesty with ourselves in dealing with problems relating to temptation, sin and conscience.

A STUDY OF DEPRESSIONS IN LATE LIFE WITH SPECIAL REFERENCE TO CONTENT.*

By ELEANORA B. SAUNDERS, M. D.

While many persons react with confidence to the adjustments incident to approaching old age, others desiring to continue the activities previously pursued are less able to accommodate themselves to the prospect of failing capacity. Then, with the first realization of great loss, they may be precipitated into an affective episode more or less severe which may lessen the already waning powers of adaptation. Bereft of much of the glamour and enthusiasm of youth, these former adjustments, which have supported more or less successfully the earlier years, begin to fail with mature age. As a result the attitude of many people in the decline of life is none too optimistic. Unusual pressure of extraneous circumstances, or stresses, and disappointments may overwhelm them, especially when the makeup is somewhat rigid and there is lack of ease of adaptability.

Mental illness at almost any period of life may show symptoms of depression. However, patients at the involutional period are much more susceptible to this state than are the more youthful. They drift easily into ruminations of loss, of self-censure, of regret, and of guilt because of neglected opportunity in past life, because of doubts of the present, and of feelings of personal inadequacy for the future. They may, with the waning of the biological drive at the involutional period, react to frustration or loss with deeper and more enduring depression than was characteristic for them in the depressive reactions of the earlier years.

Depression may exist in a rather pure form, characterized by sadness, lowered mood and general inadequacy. With different patients, however, the expressions of discomfort may vary in intensity and in form. Close study of individual cases of affective illness will disclose the fact that even benign depressions are not as free of content as was formerly thought. Very few are devoid

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of exaggerations and distortions of fact associated with the development of the illness and with the problems of their lives. The phrase *late life depression* is used with various meanings by different workers. With some it is synonymous with the *involution depression,* as described by Hoch and MacCurdy. With others *involution* depression, *agitated* depression and *late life* depression carry the idea of any manic-depressive illness at the involutional period. In their report Hoch and MacCurdy conveyed the idea of a specific syndrome. In the other sense the implication is a depression at a definite (involution) age. With still others the name *involution depression* is given to a depressive syndrome in middle life in which there is a rich delusional content, occurring in patients who have had no previous mental illness. The term *involution depression* is extended by others even to the concept of a late life attack in a recurring form, which at the menopausal period takes on new content not expressed in former attacks.

While any individual episode of depression in late life may present classical affective features, the time of incidence and history of recurrence in former years, of course, afford a different background. Expression of mood and topic of content may be similar in almost any of the cases, and particularly is there a tendency to trend formation or symptom-grouping which may be alike in cases with history of previous attacks and those with late life onset of depression. Sometimes it seems as if the so-called late life manifestation arises out of latent or dormant depressive trends long existent. The time of onset of depression does not alter the mechanisms of the process, but it may be indicative of strength, security or balancing forces in those who remain well until the menopause period. These patients seem more able to support the drive of life during the productive years but begin to wane with involutional biological failure. As a result even minor stresses occurring in advanced age seem adequate to disturb the balance which may have been maintained in youth.

In an effort to gain a better understanding of the preoccupations of this type of illness, observations were made with special reference to the expressed content in 300 patients suffering with affective illness, depressed phase, who had been admitted to the Sheppard and Enoch Pratt Hospital. The productions of patients

were studied with reference to the content and symptom formation and to aspects of the course and development of the depressive episode. The group includes depressions with an initial onset in late life and cases in which there had been former attacks previous to the episode occurring in mature years. Only depressions occurring between 40 and 60 years of age are included in this survey. The upper age limit of 60 was chosen arbitrarily because after this time senile changes are more likely to be found.

With respect to sex, marital status and familial potentialities of the members of the group, the situation is as follows; there is a greater proportion of women—102 men and 198 women—but nothing can be made of this fact since there are numerically more women admitted to the hospital than men. With respect to marital state, in contra-distinction to a group of schizophrenic patients, there are fewer single. Many more patients of the affective type make adequate marital adjustments. Of those employed, both men and women, the occupations were not sufficiently constant to have any specific influence upon the onset of illness. The occurrence of mental disease in more than one member of a family has long been a topic of discussion of etiological factors, environmental or familial. The predisposition to this occurrence is said to be greater in the affective than in the schizophrenic types of mental illness. Investigation of this aspect of the group revealed that a greater number of cases occurred in families in which no other patient is reported—in 199 cases there was no other in the family group. Instances in the immediate family or of uncles and aunts are found in 109 cases. The patients in whom there was a familial tendency showed a larger number of cases in the recurring types. There was a greater tendency to episodes in early life in patients whose mothers had been subject to mental illness. In the late life types there was greater incidence of illness in the father and in the siblings of the same sex. Interesting and significant instances of occurrence of mental illness in almost the entire family are reported.

Depression may be ushered in as a fairly prompt reaction to real or fancied loss. This response is seen alike in patients without great personal resources as well as in those previously considered efficient and aggressive. The following is a case of depression in late life in a patient who had earlier, more benign attacks, largely content

free, from which she recovered. In the last illness there was a much more complex clinical picture, characterized by self-incrimination and condemnation with prolonged invalidism ending in death due largely to inanition.

A. B., 50; a widow; father a physician; mother died of paralysis; second in a fraternity of four. Health was generally good. Had influenza, suffered with constipation, headache, and insomnia in earlier life. Puberty normal; was married to a minister; made frequent changes of home; had two children; menopause at 40. She was animated and energetic; had perfect self-control; was proud and presented somewhat austere appearance; bore up well with illness and financial stringency in the family. At 30 following the death of her mother there was a depression in which she repeated, "What am I to do?" At that time there were sadness and difficulty of concentration of attention. At 39 she was depressed for two years. She recovered in both these instances from content-free depressions. There was at 50 a third attack associated with the sickness and death of her husband. She lost weight, expressed a dread of the future, had periods of tenseness, slept poorly and was always gloomy, "up and down" in mood, and repeated, "What are we going to do?" She blamed herself; could not "concentrate attention"; began to think her family was in want; feared impending disgrace; and finally made an attempt at suicide. After this she believed she was thought to be a "dope fiend." In deepest depression she was very restless, thought her "family would be evicted," that they would starve, that she "was helpless to save her children," that they were becoming "insane," that her "disgrace" extended to them, that her condition and theirs was due to neglect, that through her they had suffered privation and that while she had done the best she could she was "nevertheless, responsible for what had happened." During the periods of greater calm she was in her home or travelling, but at intervals her family was forced to resort to hospital care for her on account of limited food intake and attempts at self-destruction. She began to think she was "unclean." There was marked self-depreciation, "I am a burden." She had an idea that the doctors in the hospital had "contempt" for her and casual passers-by scoffed at her. In a hospital she thought something prevented her from writing and thinking, "I don't know why I have this difficulty in speaking." She was slow in speech, was well oriented, alert, had no objective loss of memory but expressed feeling that she could not think. She began to speak of her hospital stay as "just punishment" for what she had done and of being "nervous and worried." "I am a criminal, I should be punished, I left my family." Her mood was dejected, "miserable." "I am to blame for all this, for being here." Occasional auditory hallucinations were present. She began to refuse food, said it was filthy and infected with germs. There were vague suggestions that urine was put in the fluids given her and of the fact that "the food is oily." There was continuous worry about "that stuff poured into me" (referring to artificial feeding). "I am being turned into an animal by such food." She often asserted that

she contaminated others by touching them, that she had lost her "sense of feeling," and that she had destroyed the world, remembering her masturbation habit. She thought that "all the surroundings are dirty," "everyone is too kind," but that she "defiled everything." She became more seclusive and more sarcastic in her remarks. "This is the end, there is no use to go on." She refused to bathe, resisted a change of clothing, said she was being wronged by the enforced stay in the hospital. Her general health suffered through meager food intake with resulting emaciation. After five and a half years of illness, spent largely in different hospitals, she died of exhaustion.

There was in this case an appearance of sadness, weariness, and resignation without marked irritability, but occasional restlessness which was controlled when observed. At no time was there the overwhelming emotion so often seen in the acute fulminating types. This illness ran a long tedious course with sleep and digestive difficulties. While occasionally petulant and critical about the hospital conditions, the patient maintained self-censure and was always approachable though reassurance was without avail. The delusional content was usually about her body and her concern for her family and their needs, but was without frank persecutory trends. There were distortions, but of a depressive self-accusatory character, not bizarre. This attitude of self-censure, extended to others, was expressed in the later stages by occasional remarks that doctors scoffed at and avoided her, but always with a feeling that it was "just punishment" for what she had done. She maintained a dignified, somewhat austere manner, rarely let down her guard or admitted need of help. There was little evidence of childishness or extreme anxiety. The ideas of loss, of poverty, of acceptance of responsibility for her condition as well as for hardships arising from it which she had brought on her family and of her realization of "just punishment" indicate an underlying sense of guilt in a recurring depression which continued in the depressive mood.

Depressed patients are often fixed in a rut of thought. Their continuous complaints of "brainlessness" and of a fear of "losing the mind" indicate a groove-like manner of thinking. They speak in low dull tones or maintain a monotonous repetition. They reiterate statements of sadness, of discouragement and of feelings of inadequacy and personal dissatisfaction. The stereotyped repetition of expletives, words or phrases seem often to be a substitution for a disagreeable wish or impulse. It may be used as a means of

draining off emotional tension. In periods of great stress, however, there may be a rapid furious press of speech associated with a panic-like state. While the expression of mood is often, in the early stages, a statement of depression and guilt, the feeling states vary from slight shading from normal mood to a sweeping emotional upheaval; from sadness and dejection to the shallow apathetic or petulant state seen in many of the more prolonged depressions. Their ruminations may shade from mere physical discomfort to somewhat bizarre misinterpretations of body function or the strictly mental preoccupations may be the subject of complaint. Often even in mild types there may be vague statements of topics related to medical problems. Diseases and symptoms which are not frank and understandable are often reported by them and in the course of the illness many depressive delusions of guilt, of loss and of punishment may arise. A feeling of loss is frequently the main expression, loss of hope, of reputation, of family, of property, all because of deep realization of personal guilt resulting from transgression, "the unpardonable sin."

While simple, relatively mild types of depression are often preoccupied with ideas of somatic discomfort, in phases of great affective stress, there is in many of the more prolonged cases an additional tendency to the development of deepening hypochondriacal substitutions for personal dissatisfactions. Patients of this type claim that they are unable to sleep, to eat, or to eliminate excreta and they believe the physical discomforts are the "center of the trouble." This realization may be expressed in organ loss, the brain has shriveled or dried up; the stomach is gone; the intestines are closed; there is no place for the food to go. Hypochondriacal preoccupations may be expressed through fear of incurable disease such as cancer or in the constant monotonous complaints of constipation, bladder discomfort, and indigestion. They convey fear and apprehension concerning the patients' self-preservative functions or their erotic strivings, or they may by the means of expression for distortions of reality. Again, there is a hidden, substitutive or symbolic meaning. The incidental association of physical disease and depressive illness may be accepted by the patient as a casual occurrence, but apart from this aspect the somatic complaint may be a vehicle for the expression of personal dissatisfac-

tion. The conception is expressed in the complaints of patients often reared in a strict environment, sensitive and gentle in make-up, who show unusual ability as students early in life, graduate with distinction from leading universities, and make steady advancement in professional work. The mental illness may develop gradually over a period of years, being intimately realized in somatic sensations referable to the gastro-intestinal tract. Following acute physical reactions, often minor in nature, they may become apprehensive and complain more and more frequently of chronic constipation or of gastric discomfort. They refuse treatment, reassurance, or benefit of medical opinion and become engrossed in somatic preoccupations to the exclusion of almost everything else. They become more frankly depressed, speak of loss, and entertain transient suicidal notions. They say repeatedly that everything is lost, their case is hopeless, they cannot eat and that their bowels do not move. All spontaneous remarks and replies have a bearing on these topics. They worry, exaggerate the seriousness of the physical condition and deny its mental or emotional origin. Paranoid or hallucinatory trends are rare. The memory is good and the general intellectual attainment is usually exceptional. In hospitals they are sad, restless, petulant and dependent. They pace up and down complaining about constipation and become more and more preoccupied with ideas of loss and with fear of death from an incurable disease. These patients with intellectual capacity, with impartial judgment on all impersonal topics are in their illness unable to reach out to any other interest than their " discomfort." Almost any subject introduced becomes the means of strengthening and extending the conviction of their physical illness.

Motor tensions and anxiety in many depressive patients seem to be augmented when they are unable to express fully their preoccupations in word or movement; and in states of deep feeling or in conditions for which there seems to them no rational solution, they resort to motor means to augment verbal expression or to lessen stress arising from thwarting obstacles or disabilities. Motor means of expression are not foreign to us. Often much may be said in a movement or gesture and in conditions of mutism and language disability persons resort to mimicry. It may be seen in children and is said to be characteristic of primitive people. It is apparently a more primitive means of expression than speech.

Furious motor activity may be accompanied by sparse speech or by loud exclamation or stereotyped repetition of the same utterance in the more prolonged cases. While many merely utter a monotonous word or phrase there are those even in periods of intense agitation who are able to communicate the content of their preoccupations. Anxiety, frequently present in the formative periods, may be transient in the initial and more prolonged in the later stages of depression. The intensity and duration vary from uneasy restlessness of a few hours to a furious almost continuous agitated state. Tremendous feelings of self-dissatisfaction and despair arise when patients become aware of their own hostile and asocial impulses. These frenzy states are frequently seen in patients in whom there was, previous to the depression, conflict between religious beliefs and erotic stress. Preoccupied to the extent that they cannot execute successfully any purposeful activity, they cling to passers-by, chide them or plead with them for help or to be permitted to go home. They are unwilling to terminate an interview, cannot accept reassurance and speak only of their dejection and gloom.

Remarks made by patients in justification of attempted suicide disclose the fact that while in a panic-like state they feel that the enormous guilt and self-incrimination make life impossible. They hate themselves because of their thoughts and wishes and, sometimes, because of failure to secure satisfaction for instinctive cravings. Many speak of continuously recurring thoughts of intolerable nature and say that in the attempt at suicide they wish to kill the thoughts they entertain. Others feel themselves a burden. Suicidal tendencies may arise from a desire " to be free," " to return to God," or through a feeling of " desertion with loss of any further reason for longer life." After the most determined and repeated efforts to harm themselves patients may refuse to make any statement or may merely reply to questions with " I don't know." Others try to smooth over or minimize the occurrence, or they may frankly deny having made an attempt at all. A furious driven type of depression with almost continuous preoccupation with ideas of self-destruction said he was forced to do so in order to prevent putting into effect thoughts of killing his wife and son. Several of the tense panic cases felt that they had contaminated others, had made men sin, had transgressed against the Holy Ghost and were deserted by God.

During these periods of emotional stress, expressions of self-dissatisfaction and regret for casual activities of mature years are varied. Fancies, distortions and preoccupations of early sexual experiences are frequently recalled and immediately become topics of worry and remorse. Childhood occurrences long forgotten and recalled with added self-censure color later attitudes and may be assigned, by the patients, as the cause of the mental illness which they consider a direct result. Regret for loss of opportunity and fear of punishment because of previous contraception or an unwillingness for parenthood are frequent expressions of guilt. On the other hand, fancies associated with loss of potency and of lack of productiveness stimulate fear of punishment for indulgences in early years. Often there is a vague feeling of guilt for activities arising outside of their control for which they maintain, however, a firm conviction of absolute personal responsibility. These thoughts, in relation to former activities considered sinful, frequently concern their children. This may be demonstrated by the case of a mother who believed she had "induced the abortion of her daughter, had accused her of adultery, had influenced her to live just exactly as I did."

The two following cases illustrate general trend differences in the agitated types. The one apparently overwhelmed by conflict and stress repeats endlessly in a monotonous manner exclamations of dejection and despair. The other is characterized by the accession of delusional trends associated with increased motor activity. In the latter the complaint consists not only of a repetition of word or phrase, but in addition, patients may build up in a furious agitation, with continuous restlessness, a variety of somatic delusions, such as loss of brain or stomach, fear of cancer and incurable disease or delusions of an erotic nature. They often disdain mental illness and develop the belief that the condition is entirely due to physical causes and elaborate hallucinations and depressive delusions which corroborate the feeling of guilt.

B. M. Sister had psychosis. Patient was the only unmarried daughter, a Catholic. She had been cheerful, though sensitive, and somewhat reticent but had had a successful teaching career. In the first attack she showed little evidence of agitation but went into a deep depression. She felt tired, had been depressed, had worried, had had an "awful fear." She had become moody, "couldn't go on with work," had felt as if her "soul were sick," as

if she were "lost"; she did not sleep well, "wished she were dead." She had said repeatedly that she was "not sick but lost," and had worried about the fact that she had "abused nature" (masturbation). There were complaints of inability to concentrate attention, though she was in this, as well as in a later depression, unoccupied during the entire illness. There were "heavy feelings" in her head, "dull, unnatural." The realization of illness was expressed in the words "I am not myself" and in terms of persistent belief that "I will never be well." She wept, felt insecure, was somewhat resistant; but she recovered entirely after about a year. In this and in the later attack the onset had followed a realization of loss; in the first, the terminal illness of the mother; and in the second, the temporary loss of capacity in herself sustained through a broken bone. After an interval of 12 years following the injury in which she feared loss of capacity, she became again depressed and reserved, "was tired," lamented the illness and her "uselessness," blamed herself and said she had not lived the right kind of life. Later she began to show self-pity, "I have lived a good life, why did this illness come to me," and "you cannot help," in reply to the doctor's questions. With the complaint of being beyond help she became noisy, lamented her state, thought her soul was "dead, damned." She grew more restless and agitated and for months walked the floor and moaned. With the waning of stress she was able to speak of the feeling of being dead and of "oblivion" between her and the world. There followed a phase in which she was, on awaking in the morning, restless and agitated, complained of fear and of a feeling of strangeness, during which time she said she had "no feelings," "I am a beast," "brain will never get normal," "life is over," "it was a lovely world," "I am pushed off out here on the edge of the earth." After about 18 months she was removed to the home of her brother, where she gradually improved and recovered entirely.

T. E., 40 years of age; a precocious child; a handsome, imperious woman; married at 18; had three children. Illness set in about a year before she was admitted to the hospital during which time it was said that she was depressed. Hers was a history of gradual onset. She became weary and discouraged, was somewhat petulant and whimsical, lost in weight, "collapsed." At the time of admission she was sad, retarded, answered questions in a low, monotonous voice, reiterating "Nothing will help," "It's no use, I am not myself," "I have not done as I should." She said she had worried about finances and domestic discord. She continued to be retarded, silent and preoccupied and later made a determined attempt at suicide. While confined to bed during the period following the accident she became anxious and developed a fear that she would be sent away on account of her persistent efforts at self-destruction. She became restless, said she was "doomed, lost"; spoke of being in the doctor's power, "You know, you understand." With lapse of time she grew more agitated and more actively suicidal, made demands, was uneasy, critical, resistant and finally refused food. There developed at this time an insidious change, a shifting of censure from herself to others. She developed a fear of torture, spoke of "fear and dread,"

thought she was to be killed but "had a right to live." She tried to escape from the hospital, clutched at everyone within reach, and became resentful and hostile. She slept poorly and pleaded for protection, thought the food had been poisoned and that she was being treated worse than other patients. There was almost constant mutilation of skin and nails. She often spoke of the treatment as being torment, became emaciated and exhausted, and developed a coincidental physical illness during which she became less agitated but continued to be petulant and critical. She believed that she was hated, and while she appeared depressed and worried she spoke of "persecutors." For months there was little change. She continued in an agitated and difficult state; talked of torture and of punishment, but, finally, she improved and was transferred to a home hospital where after a long convalescence she recovered.

Patients of the former type may for a period of months utter only an "Oh, my!" or "Oh, God!" as they stand or pace restlessly back and forth over a limited area. Later, when able to speak more freely, they tell of preoccupations of grief and loss. Ruminations of self-censure and unworthiness frequently refer to the sex life and early morning agitation is often associated with dreams and fancies of erotic longings for which they have feelings of guilt. Depression of a year's duration in the latter case became much more complex following an injury arising from an attempt at suicide. A furious agitation, the trends of which indicated hopelessness and despair shifted over into a condition characterized by self-pity but with a hostile accusatory attitude towards others. She resisted all care, became increasingly difficult, refused to dismiss those whom she blamed for the existing condition, was unreasonable, exacting and critical. She was often abusive and resorted to impulsive attacks on others or offered blind resistance to any care. The attitude of self-censure and unworthiness with attempts at suicide alternated with reactions of hostility and aggressiveness in her relations to others. Tremendous feeling of need of punishment arising from a sense of guilt often created situations in which she tried to provoke reproach and censure of others. Delusions of torture and of persecution entirely apart from any realization of personal origin were persistent throughout the severest stages of her illness, but with lessening of emotional stress they gradually disappeared.

Even in benign depressions of short duration there may be projections. Along with the pure forms of expression of affect there

are, in different individuals, modifications of the classical features. However, much of the content built up on a feeling of guilt may be dependent on the affective state and be in harmony with the mood variation. Associated with the feeling discomfort and inability to think clearly there are vague references to the possibility of harm to the self and to the family. Patients often scan newspapers in an effort to corroborate their fears of exposure or arrest for wrong they believe they have done. Personal dissatisfactions and feelings of guilt in tense, depressive patients are often extended to surroundings, to doctors, to misunderstandings of the family who was instrumental in sending them to the hospital. The patients' own conviction of wrong they have done is projected in the belief that others condemn, censure and avoid them or "know their crime." The continuous repetition of the remark, "I never had a child, I never killed a child" may be the admission of fancied guilt and defense against imagined accusation. The following case presents a varied content expressed in the course of an affective illness in a patient suffering with her second depression which occurred in mature years:

S. S. The oldest of three daughters brought up in a strict family. Father obstinate; mother rigid, silent. Patient was a good child, obeyed her mother without comment and never confided in anyone. She was reserved and ambitious, but made a good social adjustment. She broke off in girlhood with the man of her choice and was urged by her mother to marry another, her present husband. Soon after, a depressive episode of three months' duration occurred. In this illness she contemplated suicide but soon recovered. Interruptions by surgical intervention of two ectopic pregnancies resulted in serious disappointment and regret on account of her childlessness. Twenty years later indecision about adopting a child kept her somewhat unsettled. She began to lose interest in her usual activities and for about six or eight months she was mildly depressed and again had occasional thoughts of suicide. She worried about being a failure, lost appetite and was sleepless. Then followed a three months' period of deeper gloom and preoccupation with a growing tendency to seclusiveness and contemplation of drowning or gas poisoning. Upon admission to the hospital she was silent, tense and deeply depressed. About a week after her entrance there was a determined attempt at suicide after which she was more precipitate in the efforts to kill herself. She spoke of regret, of guilt for her actions in the past, and for the attempt at suicide. She reproached herself; thought others accused her, "heard them speak" of her and said she had "let herself go to pieces." Preoccupations were of "lost motherhood." "I should have adopted a child." "Others said I didn't love my husband enough." Then she felt

"accused" of the habit of masturbation, which she had had in childhood. "That is the cause of my childlessness." She developed delusions that her husband and the other members of her family had died of shock when they knew of her guilt. "I should expect nothing other than their loss. I have been so wicked." Even after seeing her family she could not accept them as alive. "They don't look real; they must be dead." During a comparatively short interval in the most acute phase she had a feeling that her brain was controlled, her mind read. For a period of two days only she was untidy in her habits through incontinence due to inattention. At this time she thought she was unable to walk, spoke in a somewhat childish manner, showed stress, masturbated, developed a feeling of trembling in her pelvis, "a vibration." There was furious self-hatred and incrimination. Soon after she began to speak of violent means of torture which were to be directed to her and to her family because of her guilt. She was rigorous and relentless in fears and fancies of punishment to be inflicted on her. There was from time to time an arrogant, almost superior, attitude in her relation to those about her. In her remarks she conveyed the impression of former competence in terms of what she was, had had and had lost as a result of the terrible habit, referring to masturbation. There were many references to sex topics in statements of her feelings and of accusations against her. For a time she expressed hostility and resentment against the hospital for its treatment of her. For this she could give no reason "except that they can mistreat me when they know I am helpless." As the depression lifted the delusions disappeared, first the persecutory and then the somatic. During convalescence she was able to give further explanation in regard to the trends. A rather deep depression with regret for the trouble her psychosis had caused her family and a degree of humiliation arising from the illness were present for several months after which she recovered entirely.

In the early stage ruminations of regret and self-condemnation dependent on the feeling of failure due to childlessness were present. Then followed uneasiness about the "salvation of her soul" and preoccupations of the "unpardonable sin." Accession of depression associated with worry about auto-erotism was accompanied by delusions that others knew of her habit and as a result scorned and avoided her. At this time, she spoke of fear of punishment which was only for a short time, in deepest depression, considered as undeserved. During all other phases she accepted it as "just." About this time feelings of strangeness developed. She thought the members of her family had died of shock when they knew of her disgrace and that her home was gone, destroyed. She felt apart from everything familiar to her previous to the illness and said she was not like her former self. The somatic sensations represented

to her a generalization of sex stress. This she associated with the "sexual sin" which she thought had caused the destruction of her family and had endangered her safety. The delusional fabric which served to extend the sense of guilt was imposed on a depressive basis and gradually disappeared with the lessening of the affective stress.

Many patients express personal dissatisfaction in terms of criticism of the surroundings. They exaggerate inconvenience and many reply to questions with demands to go home or in other evasions. Tension and anxiety in the early stages often precede the development of hostility and the subsequent formation of content paranoid in nature. Patients often project feelings of guilt to others through an attitude of suspicion and then gradually elaborate thoughts to confirm the conviction. On the other hand, they may by means of a self-pity reaction displace responsibility and accept a passive attitude of being unfairly treated by fate. They deplore their condition and make excessive demands on others. Again this type may react with a negative, unresponsive attitude or by withdrawal into seclusiveness. They may become spiteful and childish or react with hatred, but never with aggressiveness. Patients with an adverse hostile attitude remain taciturn and as the reactions of hatred and resentment are strengthened paranoid trends which complicate a fairly consistent depressive attitude are disclosed. Cases with a tendency to tense, contentless harping, or to a critical petulant attitude, or to a silent and offish manner frequently disclose, upon close and prolonged observation many paranoid attitudes, if not frank delusions. In addition to the gradual change of symptom make-up due to the development of delusions during the prolonged depressions, there is the acute fulminating case with early appearance of projections. Hallucinations of an accusatory nature were most frequent in the confused, dazed types. Auditory hallucinations were most frequent; the combination of auditory and visual was next in frequency; visual hallucinations alone were present in comparatively few cases, and the olfactory in a limited number. Delusions in regard to the content of food existed frequently.

Regressive attitudes and tendencies to dilapidation may be observed in depressions even though there are in other respects many

evidences of benign illness. While they are often more frankly expressed in behavior than in spoken words these regressive traits may give rise to petulant complaints and demands for attention not unlike those seen in peevish children. The absence of hostility with marked reversion to infantile behavior which may modify the trend formation and the behavior reactions is manifested in the following instance:

M. F. A rather tense, orderly type of woman, somewhat delicate, at the monopause period became worried and censured herself about the acquirement of property which was later disposed of at a sacrifice. She was restless, depressed, discontented, and went from hospital to resort with only slight improvement. After about a year the depressive syndrome became more aggravated and following a minor street railway accident she grew more impatient and difficult. She refused food, became apprehensive, feared harm to her husband and sons, began to deny the existence of the family, said she was a "stone." Then followed listlessness and inactivity during which she merely said, "I don't remember" or "I don't know." From time to time she was tearful and depressed and felt that she could do nothing. She gradually refused to make any effort; lounged, whispered "too little to do things"; began to soil her bed; refused to walk; would not eat unattended; was fed like a baby; was "helpless," knew "nothing," saying, "I am not sure of anything," "I am just like a baby," "just learning to walk." She maintained this helpless attitude through stages of regressive behavior demonstrated by crawling, soiling, artificial and later spoon feeding, but always with a gentle docile manner. She was taken along in the process of treatment through the various phases of childishness and was encouraged to assume an attitude of independence. After a period of two years' hospital residence she was placed with attendants in her home, where she gradually improved and finally recovered after an illness of four years' duration.

Having apparently lost the drive to maintain former standards of adjustment many patients become increasingly preoccupied and further failure may be manifested by the development of untidy habits and by the increased indulgence of auto-erotic satisfactions. There may be distorted notions in regard to food. Disgust and revulsion in reaction to the belief that food contains urine, feces or germs, that it is unclean or that it consists of the flesh of members of their families are frequent excuses of petulant depressions for refusal to eat. The idea of destroying relatives and eating their flesh may extend to the idea that they have through their secret vices in earlier years destroyed all the world. Emaciation due to limitation in the quantity and variety of food often results. On the other

hand, many remain well nourished even though they complain of loss of appetite, of lack of stomach or of obstruction of the gastro-intestinal tract. Statements of the prolonged chronic depressions may reveal whimsical, erratic behavior attitudes and the monotonous repetition of obscure, bizarre complaints, or they may, through growth of hostility, develop aggressive suspicious attitudes. In these cases there are few organized trends of persecution, but they remain offish, untidy and destructive. They find no satisfaction in others but become more irritable and seclusive or more spiteful and aggressive. They will not reply to questions and may strike impulsively at anyone who approaches. These aggressive symptoms may be temporary in the course of a fulminating acute type of severe depression ending in recovery or may indicate a gradual progressive development associated with increasing hatred.

In the study of a large group there is always the problem of how to dispose of the irregular, the unusual and the border cases. To exclude them entirely from comment makes for a purer form of depression for study, but there is the element of too rigid discrimination of symptom values. Patients of mature years may develop an affective disorder in which elations and depressions occur, but behind the mood swings is the trend suggestive of continuous thought, even though colored by the mood alteration, to the extent that it seems possible that the affective attitude in reaction to reverses or personal loss may free deeper underlying tendencies. However, much of the expressed content built up on a feeling of guilt may be dependent on the affective state in harmony with the mood variation and is not as much of a borrow from the schizophrenic reaction as was formerly thought. At one time many psychoses of episodic nature even in late life were considered as affective or manic-depressive in type and those of prolonged duration as schizophrenic. With increasing interest in the psychic content in illness, the points of differentiation were considered in terms of archaic, primitive or dream thinking of schizophrenia, reserving the suggestion of psychoses without delusions or fancies or twists for the affective types. Of course in this, as in other divisions into categories, not every individual of the group fits into the type in all details. The depressive syndrome basically affective in nature is frequently accompanied by projections so frank and so independent

of mood genesis that competent workers may as a result of observation during a single phase of long illness consider it ideational in origin. This is often justified when we consider how many expressions of mood alteration, delusional-directed, exist in the course of frank schizophrenic reactions even of long standing. Eccentric expressions of mood in affective disorders of later life frequently offer features of the schizophrenic, of the organic and of the neurotic organizations. The complicating features in these cases may not materially alter the clinical picture of the affective psychosis, its leading trends nor its behavior manifestations. Illness with frank outbreak in late life may in reality not be of recent formation. The historical facts may indicate a gradual change over a period of years with more acute and somewhat impure development in late life. These features may be closely interwoven with the symptoms of initial affective disorder, but may prove on close study to be much more nearly schizophrenic in nature.

In addition to the inter-relating features of content suggestive of the affective or of the schizophrenic origin, symptoms of the psychoneuroses also occur in depressions. This association may be manifested in the compulsive or hysterical and invalid states which exist as an initial expression or as a transient symptom during the course of the psychosis. It is a well known fact that patients who demonstrate obsessional traits are prone to recurrence or accession of tense depression which may arise subsequent to additional frustration, or they may exhibit compulsive behavior even though previously no obvious tendency existed. There seems to be a relationship, also, between the compulsive behavior of the psychoneurotic conditions and the states of increased motor tension in the prolonged agitated depressions. Patients with dormant compulsive traits may, during the initial and convalescent phases of the depression complain of the recurrence of words, of lines of poetry or of obscenity. Subjective realizations of a "confused state" may exist in almost any depression, but, in addition, there are cases free of organic change characterized by symptoms of confusion. These patients say they feel "changed"; that they are unable to perform usual tasks or to concentrate attention. The inability to "think through the problem" approaching the puzzle state may be seen in the process of short, acute, affective types. The thinking disability is augmented or complicated often by hallucinations for

which the patient has insight. In the course of the psychosis a "stunned" reaction may exist during which there is no frank statement of depression or feeling of guilt. The period of life in which a late depression occurs admits the possibility of the existence of organic change as a complicating factor. The greater likelihood of such a complication is offered in the retarded confused cases and in those patients who formerly had a psychosis which was more nearly content-free. These cases in the midlife episode present a more complex picture characterized by frank delusional formation, by the development of anxieties, and by motor restlessness. These symptoms of affective disorder may be confused with manifestations of arteriosclerotic change, but in the cases of this group no demonstrable organic involvement was elicited during the depression nor later in the period of convalescence at which time physical findings were negative. However, there are cases of frank organic origin at this age who as a result of increasing debility become discouraged and develop on a physical basis a depressive syndrome.

Affective episodes which appear after middle life are more likely to present symptoms of depression, mild and transient, or they may be of a much more prolonged insidious nature. The greater number of cases in this group of depressions occurring in late life had no history of previous attack. The recurring type was next in numerical frequency; the alternating type with previous manic and depressive swings fewest in number. There was gradual onset of depressive symptoms in the majority of the cases studied regardless of the history of previous attacks. Physical reactions associated with an insidious onset presented prodromal features which were replaced by the depressive complaint or existed as an outstanding feature throughout the illness. There were instances of coincidental physical disease upon which a subsequent depression developed and in a few cases the somatic involvement merely added to the complexity of the depressive picture. The fairly abrupt or more precipitate induction was more often seen in patients who had had, previous to the late life depression, demonstrated evidence of being easily overwhelmed by loss and frustration or by any occurrence associated with great stress. The course of even the benign cases in the group was characterized by fluctuations, misgivings and doubts and often there were accessions and remissions of the

depressive mood permitting periods of fair comfort. As the depression lifted the more normal thoughts and activities gradually displaced the grief-provoking notions. However, the course in many instances tended to be one in which the depressive complaints remain fixed. These patients maintain an attitude characterized by a feeling of guilt and self-censure, by growing concern about the self-preservative or physical functions, and by an increasing difficulty in their relations to others demonstrated by testy discontent or petulant complaint. The illness may develop into an increasing indifference with loss of general interests and marked regressive tendencies manifested by auto-erotic and childish activities. The formation of projections of a paranoid nature in certain more aggressive patients brought about a partial displacement of guilt to others.

Depression may occur at irregular intervals throughout life. This condition may develop on an apparently normal or on a somewhat depressive personality basis in which the individual episode is often merely an accession of gloom and despondency. The content expressed in each succeeding attack may refer to guilt, to loss and to hopelessness. In benign or more simple depressions, which may occur at any period in life as an isolated attack or as recurring illness, the content may remain largely unchanged in early as well as in the later depression. On the other hand, patients may at the involutional age express much more complex thinking than was previously present. The content of the late life episodes in patients who have had earlier content-free depressions may be illustrated by the delusions of a woman who believed that people would recognize a change in her appearance incident to illness, that members of her family were " represented " by the hospital personnel, that God had forsaken her and her family, and that they had been reduced to the status of negro servants because of what she had done. She doubted the reality of people, had accusatory hallucinations, and vague ideas of reference and self-censure arising from the habit of childhood masturbation. All of this she recalled with an added increment of guilt; but with the waning of the depressive mood the ideas fell away. In several instances of this type after a mild manic reaction, the patients settled down to an apparently natural attitude. The majority, however, manifested no elevation of mood during

the course of the illness. Patients with the tendency to mood swings of the recurring types may go through life with elations and depression arising from unusual circumstances, or the episodes may be ushered in without any assignable cause. In these cases there may be scant content other than their descriptions of mood even up to advanced age. There may be with the repeated attacks no alteration of phase, of content or of behavior pattern. On the other hand, patients who have had several alternating attacks in early life not infrequently drift into a prolonged depressive attitude with content in excess of that present in the early episode. Marked exaggerations and distortions, such as, "will never die," "will go on forever," "have killed the family," "have eaten them in hospital meals," and sweeping denial of existence of things are frequently uttered in phases of prolonged invalidism, although they may not have been expressed in previous attacks.

Frequently depressions initiated after 40 may be interrupted by transient elations in the course of continuous illness. Patients presenting symptoms regarded as characteristic of the Hoch-MacCurdy syndrome may later in their development shift into a transient elation with push of activity and flight of ideas which interrupts temporarily the monotonous course of the psychosis. Study of the late depressive episodes in cases characterized by previous recurrences of excitements and depressions throughout life demonstrates the fact that these illnesses may with repeated attacks develop through maturing or growth in one of three ways: (a) Recurrences without alteration of severity, of duration, or of character of content; (b) Recurrences with tendency, first, to the increase of depressive content in mature years with less likelihood of frank manic expression during attacks in the late life period; and, second, to the development, at this time, in patients who formerly had contentless episodes, of a richer content expressed often by projections or by preoccupations of hypochondriacal nature, considered by certain psychiatrists as "involution" in character; and (c) Recurrences with repeated attacks of elation and depression which terminate in chronic excitements.

A comparative study of cases in which there were previous attacks and those with an initial late life episode, indicates variations in trend and content of general but not specific nature. There is no difference in the groove-like thinking and nihilistic notions which

may be present in the patients with recurring depressions and in those with initial onset in later years. Patients with late development, however, have a greater tendency to paranoid projections and to the appearance of agitation in the early stages. The striking feature in the recurring cases is the accession of content in late life where previously the illnesses were more frankly contentless. It appears that with failure of the drive of life at the involutional period regressive manifestations of depression are an easier development. Depressions of the alternating type with late onset exhibit richer content than that present in those patients in whom there were episodes in early years. There is apparently a greater tendency to agitations and to ease of projection formations in the cases with late onset, but there was in many recurring types a definite growth of paranoid trends in the attack which appeared after 40; and the likelihood to anxieties in the late episodes of recurring types is well known. A comparative study of statements and complaints of the late depression and of the recurring type fails to demonstrate content specific for either form. Symptoms characterizing the Hoch-MacCurdy syndrome may be seen in patients under 40 years of age who may or may not have had a previous depression. Prolonged prodromal somatic symptoms are more often seen in cases with an initial late life occurrence, although hypochondriasis is by no means rare in cases who have had previous attacks. Observations of both types reveal the fact that features of development and outcome present individual but not marked group differences.

While consistence and conservatism may be regarded as fairly constant factors in the depressive make-up, there seem to be individual differences in the character formation dependent on the aggressive or the passive qualities which bear a relationship to the general trend development. It appears that the aggressive hostile personality traits tend more frequently to paranoid content. On the other hand, the passive dependent traits show the greater tendency to petulance and peevishness and to preoccupations of a hypochondriacal nature as a substitute for mood discomfort and feelings of guilt. There is in the latter type a likelihood to agitations without projections and to greater ease of shifting into erotic preoccupations upon which a condition of apparent apathy may develop. These cases

without frank hostility or projection find the hospital an easy retreat from stresses in life. The extremes of the aggressive and of the passive features of personality development tend to the formation of paranoid projections and to hypochondriacal components of depressive content. Patients with recurring depressions are often pessimistic and somewhat conservative personalities who may suffer accessions of depression with reverses, bereavement or threatened loss. There seems to be a difference between the personality traits of patients with recurrent depressions and those of the alternating manic-depressive types. The former are never free of the depressive or subdued attitude while the cases with manic episodes lose all trace of hampering in elation and apparently disclaim all inhibitions. Dr. Adolf Meyer has said: "Depression will bring out the normal tendencies of the individual under conditions of mental pain or disappointment. It is pathological when it becames fixed or dominant, either because of deficiency of the necessary compensatory assets, or because of some disorder in the shifting mechanism."

The impression gained from a study in cross section of the initial states differs from that picture resulting from observations over an extended period of time in prolonged depressions. In this, as in other types of psychosis, it is almost impossible to separate the symptoms from the setting in which they exist, because when individual facts are isolated the whole picture is destroyed. With the conception of mental disorder as an integral part of the life plan in which there is even in the period of frank psychosis, a continuous development, any attempt to give a true impression of the preoccupations of patients at any one phase offers great difficulties. Value is to be ascribed not alone to expressed content, but also to dynamics of formation and to the purpose of the psychosis in the life of the patient.

The topics of complaint at the onset of depression, in the majority of the cases studied, centered about the precipitating event or stress, but their remarks soon extended to more intimate, individual preoccupations. Under pressure of emotional tension there seems to be a reactivation of dormant trends in response to privation or loss. Their thoughts in regard to their own affairs or their observations on impersonal events, and the possibility of further loss through them, only serve to extend the significance of discomforts and to make concrete misgivings and forebodings. Ruminations or delu-

sions of depressive nature accompanied by intense feeling out of proportion to the situation strengthen the belief that a satisfactory solution of the stressing situation is impossible because of the patients' feeling of inadequacy, of their inability to meet accustomed situations or because of the immensity of the loss or strain. Following the loss of former erotic satisfactions these patients easily withdraw from usual interests and turn to preoccupations concerning the self-preservative functions. A deep, inner realization expressed often as loss of parts of the body or the mind may extend to preoccupations of calamity, to immortality, to somatic realizations which may shade from mere physical discomfort to distortions and ideas of organ loss to a sweeping denial of the existence of things and to death to save the family or to prevent disgrace.

Preoccupations of guilt associated with their conception of the unusual gravity of their transgression with its potentiality for evil arouse in patients feelings of unworthiness. Their remarks frequently refer to casual daily activities, for which there is during depression an additional self-censure, but they refer more often to erotic thoughts and fancies, infantile and mature, expressed in terms of the unpardonable sin or in evasions and substitutions for frank statement of actual facts. These may embrace ruminations of childhood, real or imagined experiences, fancies of pregnancy or sex realizations expressed in distortions such as electric currents, vibrations or unreal sensations in the body. They express regret for wish-fulfilling instinct-satisfying real or fancied activities, for loss of period of productiveness, for approaching age, impotence or reaction to desexualizing surgical intervention and previous contraception, fancies and fears of retaliation or a more passive apprehension of just retribution for feeling of guilt, self-incrimination and accusation for wrong done, for which they should be punished, tortured. Their desire for punishment may be reproduced as a fear that hardships may be inflicted by doctors, legal authorities or members of the family. Again this fear of or desire for punishment is extended to or displaced to relatives. The idea of punishment may apply to the present time, to the past activities and to the future. This thought may extend to conceptions of retribution, to immortality expressed in a belief that they will never die, but will live forever to expiate sins committed here. In addition to this, there are projections of feelings of guilt to others, who they think accuse,

punish or persecute them as a just reward for what they have done, based always on a feeling of guilt. There may be also projections apparently split off from all personal responsibility which appear more closely akin to those of paranoid nature present in schizophrenia. Content usually accepted as elaboration of thought and word may be replaced by feeling and motor realizations. Feeling realization of the difficulty varies from tension and uneasiness to sweeping emotional upheaval seen in panic-anxiety-frenzy states. Motor expression is manifested in anxious restless movements or in furious activity resorted to by patients with very intense emotions, usually in reaction to frustration of some kind and in impulsive or compulsive manifestations of motor response to driving or directing emotional stress. While complaint and trend formation may be somewhat outspoken in symptom make-up there seems to be no content specific to any type of personality or representative of any phase of depression. It may be added that only so far as the more mature thought of advanced age differs from that of youth may we expect the response to depression in late life to present differences and that the character of the content of these depressions, as in that of other periods, reflects in a measure the preoccupations of the normal mental life of the patient at that age.

DISCUSSION OF PAPERS BY JAMEISON AND WALL, STEVENSON AND MONTGOMERY, AND SAUNDERS.

DR. J. W. MACNEILL (North Battleford, Sask.).—*Mr. President, Ladies and Gentlemen:* I listened with a great deal of pleasure to the paper by Dr. Wall. The two outstanding points in involutional melancholia which occurred to me while listening to the paper, are the questions of diagnosis and treatment.

I have been inclined to believe that involutional melancholia has a manic-depressive background, to which are added changes or partial dysfunction of endocrine glands or other involutional manifestations. The remaining cases occurring at this time of life I have been inclined to place in other groups, such as later dementia præcox or senium præcox.

I was interested likewise in Dr. Wall's views as to the treatment of these cases. It has also been my experience that individual treatment, which in some cases means a great deal of personal attention supplemented by graded occupational therapy and various socialized activities produce the best results.

DR. ALBERT M. BARRETT (Ann Arbor, Mich.).—In discussing these papers and particularly that by Dr. Montgomery and Dr. Stevenson, which deals with a somewhat more specific clinical problem than the others, one is confronted with the difficulty which always arises when we have to consider the construction of groups and types of clinical reactions into valid syndromes. This is particularly true in respect to the paranoid disorders, and especially those delusional reactions of the later years of life, when one is concerned with that epochal period in which there is a summation of the conflictory and unadjusted affects and experiences, in relation with the failing capacities incident to aging.

There is much need for the assembling of good clinical observations into groups determined by similarities and common factors. Many of our advances in psychiatry have been gained in this way. Nevertheless the main value of this method has been that of the material assembled. Again there arise questions which lead us back to a consideration of specific personal situations that are the outcome of special qualities of personality structure which determine the particular content of the psychosis. The reasons for the psychosis then seem to be more of innate mechanisms than specific environmental experiences.

That sexual affective factors should dominate in the content of the psychoses in the involution period is understandable when one considers the very common difficulties surrounding adequate adjustments to sex needs and the lessening of the capacities to deal with these in the involution period.

DR. ARTHUR L. CREASE (Essondale, B. C.).—*Ladies and Gentlemen:* I am sure we are all much interested in the papers we have heard this morning.

I was asked to discuss the contribution of Dr. Eleanora Saunders wherein she reports her study of some 300 cases of the depressions coming on between the ages of 40 and 60.

It appears that in approximately a third of these cases there is evidence of a positive family history. It is also noted that about a third of the cases are of the manic-depressive group. Dr. Saunders has given a good account of the mental processes of these patients.

When patients become depressed at this time of life they begin to evaluate themselves, and in so doing are disappointed, and may have more or less real cause for their feeling. The loss of a relative or a loss in business, may exaggerate the depressive reaction to the degree of a psychosis. They blame themselves and harbor the feeling of guilt, look forward to punishment as inevitable and dwell upon the thought of suicide. Some patients develop infantile fantasies of sexual character and convert them gradually into the idea of the unpardonable sin; although often enough they are quite unable to define the unpardonable sin. Sometimes they attempt to define it by a ritualistic quotation.

If I interpret Dr. Saunders rightly, she emphasizes the fact that the psychosis is a reflection of the personality of the individual patients and of individual types—the introvert, the extrovert, and so on. Obviously an individual with the same type of psychosis, occurring at different times of life, will exhibit somewhat different clinical pictures, in which the age factor plays a part, although the mechanism of depression is not changed and the essential thought content may be much the same.

The depth and quality of the affect are of importance from the standpoint of prognosis. Naturally as life goes on we expect the capacity of the individual for adaptation to be reduced and the affect reactions in some respects to become more superficial. If the feeling is shallow compared with the harrowing delusions which may be present, we feel that the prognosis is less favorable than if there is greater harmony between affect and delusion.

Dr. A. B. Brill (New York City).—*Mr. President, Ladies and Gentlemen:* I was very much impressed by these papers. All of them tried to throw some light on the nature and mechanisms of the contents of depression. Depression when observed in normal life means a loss of something—the person depressed seems to say: "I want something that I cannot get," or "I lost something that I pine for."

The depressions reported in the papers read showed that this loss was in the sexual sphere, in the love life of the patients.

It may interest you to know that besides the type of menopause patients described in the various papers there are many others whom we see in private practice whose depressions are not deep enough to warrant commitment to hospital. I have seen many patients of this type of both sexes—some men too go through an emotional climacteric period—they are depressed, but not to the extreme degree of those who have been so nicely discussed here.

We could say biologically that such patients—I am referring particularly to the women—are depressed because the biological functions of maternity are ceasing. A great many of them talk about this freely. One often hears them say: "Now my husband can no longer find me attractive. I am losing all my feminine attraction and I cannot bear any children." But when you examine them you soon find that their statements are not borne out by facts. As we grow older we all undergo some physiological changes which also show themselves in the texture of the skin, etc., for which menopause is hardly responsible. And as for bearing children, you find that these patients have deliberately ceased bearing children many years before the onset of menopause, some of them as long as 20 years before. Menopause should, therefore, be considered as a great relief from the fears of impregnation, which the patients readily see. So, one cannot understand the logic of the patients' complaints.

Many years of study of many such patients showed that at the age of menopause, an erstwhile repressed conflict makes its reappearance. It is the same conflict which existed before puberty, during the first critical period of life. At that time it showed itself particularly in those hoydenish girls who found it hard to give up masculinity. They did not wish to be women; they really wanted to be men. They struggled with the idea and consequently they took menstruation with all its concomitant physiological changes very seriously. Some of them continued this struggle for many years after the onset of puberty, sometimes until the advent of maternity. Such patients identify themselves with the father and are loth to give up their masculine component.

Now when that function is ceasing or has ceased, when menopause sets in, the same conflict again comes up; the desire to be a man is revived, but is thwarted by the cognition of its futility. But as they cannot be men now any more than they could at puberty, they manifest their desires in all sorts of symbolic expressions.

The last patient of this type that I saw only recently had the idea that the hairs on her face were so prominent, so rigid, that they stood up like daggers; she could see them stand up way above her hat. You can readily understand the symbolic significance of it.

There are some men who also have climacteric depressions. When you examine those men, you find that their masculine components are not so strong, in contradistinction to the women patients in whom the masculine component is always markedly enhanced. The paper given by Dr. Jamieson and Dr. Wall showed that plainly while the other papers hinted at it.

Now, what is going on in these depressions? Professor Strecker states that in those depressions there is a struggle between the super-ego and the ego. The super-ego, as you know, is the father representative, which embodies our ethical principles and our ideals; the ego may be designated as the personality. A depression shows a tension between the ego and super-ego in which the ego yields to the reproachments and punishments of the super-ego. But a tension between the father and the son always connotes a feeling

of guilt, a feeling of sin on the part of the son. The son feels sinful, and he has a need for punishment; a feeling of sin always requires punishment. It is what Freud calls a *Strafbedürfniss*, a need for punishment. Such surrender and yielding to the super-ego frequently ends in suicide. The content of the conflict, the nature of the sin is invariably sexual.

Sex, then, forms the content and deeper mechanism of those depressions, particularly those of menopause. The speakers—Dr. Montgomery and others—showed that the content of the conflict of sin and of guilt was sex.

I just wish to make a slight correction. Dr. Montgomery spoke about the relation of homosexuality and paranoia. Freud in his original paper on this subject expressly stated that his theories apply only to some cases, not to all paranoias, and in the first English rendition of that paper given by me I expressly emphasized this point. We do not believe that these ideas apply to all cases of paranoia. Paranoia is a very broad entity, if it is an entity. Some cases undoubtedly show that the persecutory delusions are reactions to repressed homosexual wish phantasies.

Dr. William Malamud (Iowa City, Iowa).—*Mr. President, Ladies and Gentlemen:* I think that one of the most promising features of the study of the psychoses of this period of life is the possibility of prevention of such disturbances. Dr. Barrett as well as Dr. Brill have already touched on some of the features of this problem, but there is one point that I would like to mention here.

The fact that a person goes through various crises of life and various strains and does not break down until he reaches this particular stage of life would make one search for special occurrences that are capable of releasing such a process even if the contents of it are determined by earlier conflicts.

At the Iowa State Psychopathic Hospital we have been particularly interested in the study of these psychoses, and we found one special point which seemed to us to be of great interest and importance. It was noticed that in a great many of the cases some actual trauma either in the form of an operation or injury to the sexual organs or to some of the organs related to the genito-urinary tract had occurred just before the onset of the psychosis. Operation for breast tumor in women, for hernia in both sexes, operations for varicocele or hydrocele in men, or even the fear that such operation was impending seemed to precede the actual precipitation of the psychosis. These observations were made so consistently that we came to the conclusion that they have more than an accidental relationship to the psychosis and have found it advisable to work in conjunction with the gynecologists and the genito-urinary department in order to get access to these patients before the operation has taken place. When a patient appears at the hospital with a history of difficulties of the type mentioned, he is referred to our clinic for a study of his personality and possible predisposition to a psychosis of this kind. It would seem as if the preoperative stage is the best for an attempt at preventing possible psychoses.

I want to ask the readers of the papers whether such facts were noticed in their cases.

I think that a statistical study of cases that have developed involutional psychosis, especially those that are peculiar to this particular period of life, such as depression, the late catatonias, etc., will be very important for the determination of the exact relationship that may exist between traumata of this type and the precipitation of the disease.

Dr. Clifford B. Farr (Philadelphia).—I was very much interested in this symposium, and particularly in the matter presented by the first essayist, with reference to heredity.

A year ago, in conjunction with some others of our staff, I reviewed a series of involutional cases in women, and a series of manic-depressive psychoses of the same age-period, in regard to hereditary factors. I found a very marked difference. In the involutional group the hereditary factors were scarcely more evident than in a normal or average group of people. In the manic-depressive group there was a great "heaping up" of hereditary factors. This, of course, is one of the reasons why the involutional group is separated from the manic-depressive group and emphasizes the value of paying attention to environmental and endocrine factors in the former.

In regard to endocrine therapy, we have used various substances at the Pennsylvania Hospital. Dr. Strecker some years ago reported a series showing rather favorable results from ovarian therapy. Recently Dr. Appel and others of our staff used amniotin in a series of cases without any striking immediate results, except a rise of blood pressure in a few cases. The end results were seemingly good.

The third point I wish to bring out is in regard to malnutrition. Dr. Appel, Dr. Marshall and I, several years ago, treated a series of cases with insulin, and found that we were quite uniformly able to add weight to patients just about as we pleased. In a certain number of cases, particularly involutional cases, we had a very marked coincident mental improvement.

Dr. Frank W. Robertson (New York City).—I merely wish to draw attention to something which it seems to me wasn't sufficiently emphasized in the type of cases that have been under discussion, and that is the fact that there is something that comes to us all, men and women, as we grow older. To some this recognition of advancing years comes rather suddenly and is a somewhat severe shock. We have to take that into consideration in dealing with these patients. Particularly the women notice the difference in their appearance and the loss of attractiveness, which results in fear of loss of the affection of their husbands. With men it is a realization that they are not quite so capable as they once were in business ways and other ways, which will affect them directly financially. This leads to considerable introspection and is the cause in many instances of the morbid brooding which accompanies these conditions.

This point may have been brought out in the discussion, but if so, I did not notice it; and it seems to me one which may properly be emphasized.

DR. JAMES H. WALL.—We have studied the works of Dr. Strecker and Dr. Farr, as to the administration of ovarian substances, and in our cases we are unable to draw any definite conclusions. But certainly in the decrease in agitation, the lowering and stabilizing of blood pressure, and the increase in the nutritional level of these cases we have found that the administration of such preparations as corpus luteum and ovarian extract, along with various proprietary gland products, helped considerably.

SCIENTIFIC PSYCHOLOGY AND THE SCHOOLS OF PSYCHOLOGY.

By LEONARD CARMICHAEL, Ph. D.,
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Many psychiatrists, sociologists, and interested laymen speak of so-called academic psychology, or, as the writer of this paper would prefer to say, scientific psychology, as though it were a field made up of contending speculative systems comparable to the schools of philosophy.[1] Another point of view is possible and reasonable, however, and the purpose of this paper is to make it clear. Psychology today, it seems to the writer, is not properly to be identified with any single "school" or "system" of psychology. It is rather a body of scientifically ascertained fact, more important than, and indeed transcending particular schools or systems.[2]

Professor E. G. Boring of Harvard University, in his recent important volume on the history of psychology says: "The author believes that the application of the experimental method to the problem of mind is the outstanding event in the history of the study of mind."[3] A statement of this sort is difficult to prove to one unfamiliar with the number and variety of the facts upon which it is based. But a glance at most modern elementary text books of psychology will show the reader that such books no more empha-

[1] Many examples of this view could be given; the following single quotation may serve to make the point clear: "The psychological approach employed at the Pennsylvania Hospital has not been suggested by any one school of thought. . . . . In treating the children in the hospital school, if a theory appeared to throw light on a problem, that theory served as the basis of treatment, whether it implied the behaviorism of Watson, the inferiority feelings of Adler, the 'needs' of Thomas, the type reactions of Jung, or the psychological processes emphasized by Freud." (Bond, E. D., and Appel, K. E.: The Treatment of Behavior Disorders Following Encephalitis, 1931, p. 84.)

[2] This paper is intended for those in associated fields rather than for professional psychologists, who may find little that is novel in the present consideration.

[3] Boring, E. G.: A History of Experimental Psychology, 1929, p. 659.

size any particular " system " than does a text book of chemistry or anatomy.[4] Similarly, in meetings of psychologists, such as the annual meetings of the American Psychological Association, the papers presented, almost without exception, deal with experimental and statistically analysed findings and with the interpretation of the results secured by the use of these methods.

But if current scientific psychology is, in the eyes of those actively engaged in it, not a welter of theories but a relatively unequivocal body of experimental fact concerning the response and experience of living individuals, how does it happen that there undoubtedly still are " schools " of psychology?

In a recent volume, Professor Woodworth of Columbia has attempted to answer this question,[5] and to explain the function and the present status of certain of the existing schools. Dr. Woodworth begins by pointing out that there have always been schools of thought in regard to the most effective organization of the known facts of psychology. In a sense, each new school has been a revolt from the established order of classifying the known facts. These revolts have not been, it seems to the present writer, so much revolutions in regard to content of knowledge, as revolts in regard to the expedient manner of organizing the ever increasing body of known facts in regard to human nature. It is true that new systems have often seemed necessary because new facts have been discovered which might best be interpreted by reorganizing the whole system of the science rather than by merely adding the new discoveries to the existing theoretical framework. One who would understand the roots of modern psychology, therefore, must not allow the diverse terminologies of the various schools of the present or the past to blind him in his understanding of scientific fact. The facts of psychology are often held more or less in common in the various " schools " or " systems." As yet, comparatively few psychological facts have been reduced to such a point that they may be expressed in the relatively unambiguous language of mathe-

[4] Compare, in this connection, books on psychology written before 1870 with any modern elementary text book of psychology, such as R. S. Woodworth's Psychology, 1929; J. F. Dashiell's Fundamentals of Objective Psychology, 1930; H. C. Warren and L. Carmichael's Elements of Human Psychology, 1930.

[5] Woodworth, R. S.: Contemporary Schools of Psychology, 1931, pp. 1-232.

matics, as has been the case in physics. This has led to the necessity of describing scientific psychological results in *words*. The same psychological phenomenon may be described in several different vocabularies, and part of professional training in psychology must be devoted to teaching the student to recognize the same phenomena as the same even when the phenomena are described in very different words. This is not easy, and constitutes the great stumbling block to the popularization of the factual contents of psychology.

It must be admitted that the facts are only more or less held in common by the various schools. Some of the systems admittedly do not attempt to organize all of the facts of psychology and some are, by most impartial critics, considered as less adequate to the task of organization than others. By temperament, also, certain psychologists tend to emphasize small differences rather than to stress large matters in which there is virtual agreement.

Before attempting in more detail to show how scientific psychology, as a body of experimental and observational data, transcends the limits of any single systematic point of view, it may be well, briefly to review the contemporary schools of psychology.[6]

BRIEF REVIEW OF THE SCHOOLS OF PSYCHOLOGY.

I. Introspective Psychology of the Existential or Structural School.[7]

At first, this so-called school might almost have been considered equivalent to all of experimental psychology. Wilhelm Wundt of

[6] In this review, the volume by Professor Woodworth noted above, has been extensively used. The reader who wishes to see the various systems presented by those who advocate them is referrd to two volumes entitled The Psychologies of 1925, and The Psychologies of 1930, edited by Professor Carl Murchison and published by the Clark University Press.

[7] For a more adequate treatment, consult:
Woodworth, R. S.: Contemporary Schools of Psychology, pp. 18-42.
Bentley, M., in Psychologies of 1925, pp. 383-412.
Nafe, J. P., in Psychologies of 1930, pp. 127-140.
Murphy, G.: Historical Introduction to Modern Psychology, pp. 224-234.
Boring, E. G.: *Op. cit.*, pp. 310-344, 402-413.
Titchener, E. B.: Systematic Psychology: Prolegomena, edited by Weld, H. P., 1929, pp. 1-278.

Leipzig, usually credited as the founder of the first psychological laboratory, is also the most important single figure in the development of the tradition which has come to be called loosely the structural school.[8]

As Woodworth well points out, and strange as it may seem to some modern readers, the method of experimental introspection, which is the basic instrument of this school, grew out of physiology and physics more explicitly than out of philosophy. This form of introspection, at its simplest, merely requires the subject to report what he experiences or even merely that he has an experience. When, for example, a known stimulus is applied to the receptors in his retina, the subject or "observer" says, "It is red." This method has been refined in many ways, and with particular success in certain of the "psycho-physical" methods.[9] The method of experimental introspection has also been used directly in the study of the sensory, perceptual, and affective experience, and by extension, in the study of certain aspects of memory and thought.

Today it seems that the important contribution of the "existential" psychologist is not so much in the foundation of a school as in the development of scientific methods that may be used generally in psychology. The large amount of valid experimental fact which these methods have yielded is today accepted in general psychology, although now the "subjective" terminology, in which much of it was presented, is sometimes changed so as to emphasize its so-called "objective" rather than its "phenomenological" nature.

[8] The term "structural" must, of course, be understood as applying to the theory that experience itself may be described in terms of its existential content. Paradoxically as contrasted with the structural schools of psychiatry, the structural school of psychology makes comparatively little reference to physiological processes or to the nervous system. Cf. Carmichael, L.: An Evaluation of Current Sensationism, Psychological Review, vol. 32, No. 3, May, 1925, pp. 194ff.

[9] For the review of these methods, which are applicable in a large number of situations in exact work in physiology and in clinical psychology, where they are not now extensively employed, see Titchener, E. B.: Experimental Psychology, vol. 2, part 2, pp. 93-318.

II. Behaviorism.[10]

Theoretically the experimental psychologist has always been concerned with behavior, although some have explicitly contended that ultimately the province of psychology was what may be termed "experience." Gradually, however, the view has grown up in psychology that behavior in its own right may be legitimately studied and that this study is true psychology. The factors which led to this development are complex, and can only be hinted at in this paper. In America, under Thorndike and Watson, in Russia under Pavlov and Bechterew, an objective study of certain aspects of the behavior of infra-human animals was carried on with great success. Soon it became apparent that this objective method could be applied to the study of certain aspects of human psychology. Indeed, by the use of "verbal report" instead of the method of introspection, the proponents of this school extended it to virtually all psychology.[11] While some of the most active students who have used the objective method in the observation of human response have written as though they considered Behaviorism an all-embracing school, it seems that it is probably best understood, not as an attempted universal system, or indeed as a "school" of psychology, but as an important, if not the most important, *method* of general psychology. It must certainly be admitted by anyone who has viewed the evidence impartially, that the objective study of human and animal response has contributed many important facts to scientific psychology. Such study has contributed to the knowledge

[10] For an evaluation of this school or rather cluster of schools, see:
Woodworth, R. S.: Contemporary Schools of Psychology, pp. 43-92.
Watson, J. B., and Hunter, W. S., in Psychologies of 1925, pp. 1-107.
Hunter, W. S., and Weiss, A. P.: Psychologies of 1930, pp. 281-306.
Roback, A. A.: Behaviorism and Psychology, 1923, pp. 1-284.
Murphy, G.: *Op. cit.*, pp. 263-278.
Boring, E. G.: *Op. cit.*, pp. 580-591.

[11] This method of studying human psychology has proved especially fruitful in the hands of such students as E. B. Holt in Animal Drive and the Learning Process, 1931, pp. 1-303; M. Meyer in the Psychology of the Other One, 1921, pp. 1-439; J. B. Watson in Behaviorism, 1930, pp. 1-308; E. A. Singer, Mind as Behavior, 1924, pp. 1-301; A. P. Weiss in A Theoretical Basis of Human Behavior, 1925, pp. 1-428; S. Smith and E. R. Gutherie in General Psychology; G. A. de Laguna in Speech, Its Function and Development; K. S. Lashley in Brain Mechanisms and Intelligence.

of many fields of psychology. Among the important fields may be mentioned those of sensory processes, the sensory control of behavior, the learning process, the nature of motivation and emotional response, language and thought, and, in an almost dramatic way, the determiners of personality.[11]

III. The Systems of Motor Psychology.[12]

From a very early period in the study of psychology, as noted in the two systems considered above, it has been considered essential for psychology to deal with facts of experience and with facts of behavior. In an effort to show the relationship between these two sets of facts, various theories have developed. Of these various schemes, the "motor theories" are possibly most interesting. Many of the adherents of this position have from other points of view been considered either as "structuralists" or "behaviorists," depending upon whether they put the emphasis in their experimental work on relating experience to response or response to experience. Therefore, for the most part, psychologists who have held to this theory have been concerned with the discoveries of new facts rather than with the systematic organization of a "school," with all its necessary recriminations. In his recent presidential address before the American Psychological Association, Professor Langfeld, of Princeton University, has pointed out the wide applicability of this theory as a means of giving coherence to the increasing body of scientific psychological facts.

[11] In the study of the personality, the consideration of behavior, in its broadest sense, has been called by Dr. Adolf Meyer and others "Psychobiology." Of psychobiology it has been said: "Its facts are behavior in the widest sense of reactive and constructive adaptation of the completely integrated organism." Adolf Meyer, Objective Psychology or Psychobiology with Subordination of the Medically Useless Contrast of Mental and Physical, Nervous and Mental Disease Monograph, No. 41, 1925, p. 31.

[12] For further references see:

Langfeld, H. S.: A Response Interpretation of Consciousness. (Presidential Address before the American Psychological Association.) The Psychological Review, 1931, 38, pp. 87-108.

Holt, E. B.: Animal Drive and the Learning Process, 1931, pp. 1-307.

Ibid.: Response and Cognition. Supplement in The Freudian Wish, 1915, pp. 153-208.

Washburn, M. F.: Movement and Mental Imagery, 1916, pp. 1-252.

Ibid.: A System of Motor Psychology, Psychologies of 1930, pp. 81-94.

IV. Gestalt Psychology or Configurationism.[14]

Probably more than any of the other points of view considered above, Configurationism is to be thought of as a "school," in the philosophical sense of the term. It is possible, however, to concern oneself with Configurationism as a method and as a body of psychological fact, rather than as one more candidate to play the rôle of universal system in the theatre of philosophical psychology. If one approaches the writings of the configurationists from this point of view, he finds much emphasis placed on the significantly conceived experimental studies. In the problems undertaken, there is an emphasis placed on the description of the form or pattern of experience, rather than on an analysis of experience. From this point of view, significant contributions have been made in many fields. Possibly these contributions are greatest in the study of the perception of shape and the perception of movement. Much of the polemic writing of the members of this school[15] consists in emphasis upon the fact that atomistic analysis and associationism are not, in all respects, adequate methods in psychology. Wertheimer, Kohler, Koffka, Lewin, and the other members of this school, repeatedly contend that there are many significant psychological situations in which the whole is more than the sum of its parts, and in which the nature of the whole is governed by its own intrinsic characteristics.

Gestalt Psychology has also pointed out certain facts in regard to the learning process which have been neglected by scientists

[14] For an evaluation of this school, see:

Woodworth, R. S.: Contemporary Schools of Psychology, pp. 93-125.

Koffka, K., and Köhler, W., in Psychologies of 1925, pp. 129-195.

Koffka, K., and Lander, F., in Psychologies of 1930, pp. 143-204.

Kluver, H., in the appendix to A Historical Introduction to Modern Psychology, by Murphy, G., pp. 426-434.

Boring, E. G.: *Op. cit.*, pp. 570-580.

Köhler, W.: Gestalt Psychology, 1929, pp. 1-403.

Helson, H.: The Psychology of Gestalt, American J. Psychol., Vol. 36, 1925, pp. 342-370, 494-526.

Ibid.: Vol. 37, 1926, pp. 25-62, 189-223.

Lewin, K.: Conflict between Aristotelian and Galileian Modes of Thought in Psychology, Journal of General Psychology, 1931, 5, 141-177.

[15] It should not be forgotten that in fact as well as in name, many of the important German members of this school are professors of Philosophy.

whose approach was dictated by a desire to find the elements of the process. The general psychologist who does not wish to affiliate himself exclusively with this school finds the writings of its members stumulating and in many instances valuable. The psychological novice must be warned that the vocabulary employed by the configurationist in dealing with the facts of psychology may make new experiments and new theories seem more novel and more sharply set off from older experiments and theories than they actually are.

V. Psychoanalysis and Related Schools.[16]

The general position in what is popularly called "Psychoanalysis" does not take its origin from any special tradition in academic psychology, although the curious may find many similarities between special doctrines in psychoanalysis and earlier formulations by Herbart, von Hartman, and others. The various psychoanalytical positions were at first developed by physicians interested in the cure of mental illness rather than by experimentalists interested in the discovery of scientific fact. Gradually, however, the techniques employed have been generalized and given systematic formulation. The psychoanalytic systems are, therefore, sometimes spoken of as "schools of psychology." In popular writing, psychoanalysis has even been referred to as "The New Psychology." [17]

[16] For more adequate treatment, consult:

Woodworth, R. S.: *Op. cit.*, pp. 126-181.

Janet, P., Flugel, J. C., and Adler, A., in Psychologies of 1930, vol. 2, pp. 374-405.

Freud, S.: The Problem of Lay Analysis, 1927.

Ibid.: The History of the Psychoanalytical Movement, 1917.

Adler, A.: The Neurotic Constitution, 1917.

Jung, C. G.: Psychological Types, 1923.

Healy, W., Bronner, A. F., Bowers, A. M.: The Structure and Meaning of Psychoanalysis, 1930.

Hollingworth, H. L.: Abnormal Psychology, 1930, 136-157, 311-339.

Dunlap, K.: Mysticism, Freudianism and Scientific Psychology, 1920.

Murphy, G.: *Op. cit.*, pp. 310-335.

[17] Cf. Tansley, A. G.: The New Psychology, 1920, pp. 1-283. It would make an interesting study to note the number of "new psychologies" that have grown old while the facts of psychology as a science have been developing.

The systems of Freud, Jung, and Adler, to mention no others, deal for the most part with the study and interpretation of the nature of the personality. From each of these standpoints modern academic psychology has gained something that is significant.[18] In most cases, however, the academic psychologist has integrated the material which he has derived from psychoanalysis into some other systematic formulation, and has often used other words to express the concepts which have been taken over. This has been necessary because the general psychologist must deal with aspects of psychology that have no direct concern with the nature of the total personality. The new words used in such formulations sometimes conceal the fact that the principle has been suggested by psychoanalytic writers. For the most part, however, the conceptions from psychoanalysis which have been accepted by academic psychology are those which have been validated by experimental study. To give but a single example of such material, one may well consider the present emphasis in academic psychology, upon the results of the experimental study of the development of the emotions in childhood. Such study is not unrelated to the teachings of psychoanalysis.[19]

There can be no doubt, however, that most academic psychologists are repelled by the "cult" features of the various schools of psychoanalysis. The apparently unproved analogies, the endowment of what are obviously abstract concepts with animistically conceived

[18] Cf. Holt, E. B.: The Freudian Wish, 1913, pp. 1-212.
Watson, J. B.: Behaviorism, pp. 269-304.
Many other important references could be given to special topics in academic psychology which admittedly have found their starting point in some doctrine of psychoanalysis. It seems quite untrue, therefore, that academic psychology has proceeded "with an almost ostentatious neglect of Freud." (McDougall, W.: Outline of Abnormal Psychology, vii.) The recognition of Freud by the academic psychologist, G. Stanley Hall, is said to have had important bearing on the development of the Freudian movement itself.

[19] To see why psychoanalysis, even in the field of personality, is not taken over, without modification, into academic psychology, one should read J. E. Anderson, The Methods of Child Psychology, Hand Book of Child Psychology, edited by Carl Murchison, 1931, and then turn to some psychoanalytic study such as Pearson, G. H. J.: The Psychosexual Development of the Child, Mental Hygiene, 1931, 15, pp. 685-713.

powers, and the utter neglect of the canons of scientific proof, which marks much publication in this field, is usually passed over as not even justifying the time required for criticism.[20]

VI. Purposivism and Other Schools.[21]

Psychology is today almost universally considered as a biological science.[22] Among general biologists, there is almost complete agreement that the mechanistic hypothesis, when correctly understood, is the best working plan for scientific biology. There are, however, a few vitalistic biologists.[23] Similarly, among academic psychologists, almost all adopt the general mechanistic position as fundamental. There are a few psychologists, however, who do not accept this fundamental view, but who are frankly vitalistic, usually both in biology and psychology. Professor William McDougall of Duke University is possibly the best known psychologist maintaining this view. He holds that "all animal and human behavior is purposive in however vague and lowly degree and the purposive action is fundamentally different from mechanistic process."[24]

This theory may conveniently be called the hormic psychology.[25] In its complete form it may probably be termed a *school* in the true sense of the word, because, fundamentally, it must either be ac-

[20] Those interested in the point of view that might be taken in such criticism, should consult Dunlap, K.: Mysticism, Freudianism, and Scientific Psychology, pp. 44-111. For an example of the sort of uncritical writing referred to, see Freud, S.: Civilization and its Discontents, 1930, pp. 1-144.

[21] For more adequate treatment of these systems, see the special references given in footnotes below, and also consult:

Woodworth, R. S.: *Op. cit.*, pp. 187-204.

Prince, M., and McDougall, W., in Psychologies of 1925, pp. 199-308.

McDougall, W., in Psychologies of 1930, pp. 3-38.

Ibid.: Outline of Psychology, 1923, pp. 1-456.

Ibid.: Outline of Abnormal Psychology, 1926, pp. 1-566.

[22] Many indications of this fact could be given. For example, the National Research Council Fellowships in the biological sciences are awardel in zoology, botany, anthropology, psychology, agriculture, and forestry.

[23] Professor W. M. Wheeler suggests that such teleological thinkers may be regarded as sports or mutants, comparable to *oenothera lata* among the evening primroses. (In the Journal of Abnormal Psychology, vol. 20, 1925, p. 300.)

[24] McDougall, W.: Outline of Psychology, p. 72.

[25] The word "hormic" was suggested by Professor T. P. Nunn, and refers to a *vital impulse*.

cepted or rejected. There is no doubt, however, that much of the actual work done by the few vitalistic psychologists can be accepted at the descriptive level as a contribution even to mechanistic psychology, although it must necessarily be rejected at the explanatory level by one who holds to the mechanistic hypothesis.

Besides this out-and-out hormic psychology, there are other positions in theoretical psychology that in some sense imply the explanatory importance of purpose, though possibly not as an ultimate causal factor. Professor E. C. Tolman of the University of California has taken a position in animal and human psychology which illustrates this possibility.[26]

The mechanistic psychologists have no doubt in regard to the psychological or phenomenal fact of purpose, call it what you wish. They contend, however, that it may be explained in terms of the past experience of the organism and the present stimulus situation. James Mill said, many years ago that those who exalt the anticipation of the future from the past into an object of wonder, a prodigy, a thing falling within no general rule, " only confess their failure in tracing the phenomenon of mind to . . . . the law of association." [27] In modern formulation, some such statement is today urged against all teleological and semiteleological psychologists by those who are strictly mechanistic. They urge that the fact of purpose is to be studied as are other facts in psychology. Those who say it is an ultimate explanatory principle, of course, deny this. It is difficult to understand any middle ground between these two views, in spite of the fact that some valiant endeavors have been made by the configurationists to take such a position.[28]

Besides these various hormic systems of psychology, there are a number of different positions in modern academic psychology which may be considered as more or less general contenders for the somewhat dubious title of " school." Examples of such views are the following: (1) Professor Charles Spearman of the University of London, in what he calls Factor Psychology;[29] (2) Professor E.

[26] Cf. Tolman, E. C.: Purposive Behavior in Animals and Men, 1932.

[27] Mill, James: Analysis of the Phenomena of the Human Mind (1869 Edition), Vol. I, p. 376.

[28] Cf. Ogden, R. M.: Crossing the Rubicon between Mechanism and Life. Journal of Philosophy, 1925, vol. 22, pp. 281-293.

[29] Spearman, C., in Psychologies of 1930, pp. 339-366.

L. Thorndike in what he now terms Connectionism.[30] (3) Professor Felix Krueger of Leipzig in a developmental psychology from a configurational point of view;[31] (4) Professor Knight Dunlap, of Johns Hopkins, in what he terms Response Psychology;[32] (5) Professor R. S. Woodworth of Columbia University, in what he terms Dynamic Psychology;[33] (6) Professor E. R. Jaensch of Marburg, who presents an elaborate consideration of Eidetic Psychology;[34] and finally, (6) add but one more influence of the many that might be added, the current German Culture Psychologies.[35]

In skeleton form, the positions presented above are typical of the schools of psychology. These systems may be regarded in two ways: (1) to be the statement of theories that are admittedly adequate only to certain aspects of the subject matter of psychology or, (2) to be what has been characterized as "an individual's more or less blundering effort" to present the undoubted facts of scientific psychology in an orderly manner. The fact remains that systematic points of view differ, but, for the most part, experimental psychologists understand each other. They know in the last analysis, in spite of all the discussion about schools, that it is the knowledge of human nature and not the systems for organizing this knowledge that is important.

If a scientist in some other field than psychology should ask to be given two recent books that would show the current status of psychology, it would seem to the present writer, therefore, that the Foundations of Experimental Psychology and the Hand Book of Child Psychology, would do this much more effectively than would the Psychologies of 1925 and the Psychologies of 1930, to which reference has been made above.[36] In the Foundations and

[30] Thorndike, E. L.: Human Learning, 1931, pp. 1-206.

[31] Krueger, F.: Ueber Entwicklungspsychologie, 1915, and various monographs in the Neue Psychologische Studien.

[32] Psychologies of 1930.

[33] Psychologies of 1930, pp. 327-336; Dynamic Psychology, 1918.

[34] Jaensch, E. R.; Ueber den Aufbau der Wahrnehmungswelt, 1923.

[35] Cf. Kluver, H., Contemporary German Psychology, Supplement in Murphy, G., Historical Introduction to Modern Psychology, 1929.

[36] These four volumes are edited by Professor Carl Murchison, and published by the Clark University Press.

Hand Book, little space is spent in speculation concerning the best methods of organizing facts, for the scientists who have contributed the articles in these books have been, with certain exceptions, almost exclusively concerned with summarizing the really vast amount of fact that is available in their respective specialities. The psychology of the senses, the psychology of learning, the psychology of emotion, the psychological aspects of the development of language, and the like, are treated in these volumes at a factual level.[37]

A study of the factual content of psychology seems to demonstrate that the application of the experimental method, as suggested in the beginning of this paper, was, in truth, *the* outstanding event in the history of the study of mind. The application of this method to the study of psychology has in practical experimental work done much to break down the walls between the so-called "schools of psychology." Indeed, the experimental and statistical methods have shown that many of the distinctions between schools of psychology and indeed between psychology and neurology and physiology, and between psychology and psychiatry and sociology, were not factual boundaries, but rather the artifactual constructs of non-scientific theorizers who could not know the facts. The present status of scientific psychology makes it appear that any distinct school in psychology, or indeed the ultimate distinction of psychology from the propaedeutic natural sciences on the one hand, or from the social sciences on the other hand, must appear as an undertaking of distinctly limited merit.

It is true that this means that psychology today is not coherent as philosophical systems are coherent, but psychology is rather a compendium of many unequivocal facts in regard to human nature. This state of the science seems to be a most encouraging one.[38] Possibly it may be said that psychology has reached its majority, but that even some of its friends are not aware of this fact. The chemist is not worried when his research on the one hand becomes,

[37] For a logical defense of the attitude that facts not systems are important in psychology, see Boring, E. G.: Psychology for Eclectics, Psychologies of 1930, pp. 115-127.

[38] Certain professional psychologists even regret the passing of the old quasi-philosophical order. Cf. Ogden, R. M.: Journal of General Psychology, 1930, 3, pp. 344 ff.

according to certain definitions, physics, and on the other hand, biology. His interest is primarily in an understanding of some of the phenomena of nature. Psychology likewise merges logically with other sciences on its boundaries, but the central core of known fact, which may be called psychology, increases. One who would understand human nature is indeed brave if he is sure, until he has examined this special body of fact, that it has nothing to offer him. It is still true, however, that crystal gazers and phrenologists are not the only alleged students of human nature who are ignorant of important and available psychological facts.

PHILADELPHIA AND PSYCHIATRY.*

INTRODUCTION.

By HAROLD D. PALMER, M. D.

The history of psychiatry in Philadelphia is to be found in the record of its institutions and in the biographies of the great figures who contributed to the development of this branch of medicine in the past century.

The Pennsylvania Hospital, founded in 1751, is the oldest hospital for the care of the mentally ill in America.† Its foundation was followed by the development of the Friends Hospital in Frankford and later by the establishment of the Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases. Still later came the establishment of the psychiatric department of the Philadelphia General Hospital and the construction of a separate institution called the Philadelphia Hospital for Mental Diseases at Byberry, the Child Guidance Clinic, and the Institute of the Pennsylvania Hospital.

The clinical material available for teaching purposes is almost unlimited. The Philadelphia Hospital for Mental Diseases has a capacity of about 5000 beds for mental cases and, in addition, an institution for feeble minded accommodating 300 or more. The psychopathic division of the Philadelphia General Hospital has approximately 3300 admissions per year. The Pennsylvania Hospital, Department for Mental and Nervous Diseases, has an admission rate approximating 550 annually, and the Friends Hospital

*This series of accounts of psychiatric activities and organizations in Philadelphia was made available by Dr. Harold D. Palmer, of the Institute of the Pennsylvania Hospital, who kindly undertook the responsibility of securing and assembling the several sections herewith presented.

†It is noteworthy that the first hospital care provided for mental patients was furnished by a general hospital, which thus at the very beginning of psychiatric history in America set the pattern for the enlightened mental hygiene programme which only now in the twentieth century is being widely adopted. The first state hospital in America devoted exclusively to the care of the mentally ill was opened at Williamsburg, Virginia, in 1773.

at Frankford a similar number. In addition to these there are numerous private sanitariums throughout the city and its suburban districts which take care of a large number of private admissions. Psychiatric clinics have also been established and care for approximately three or four thousand new patients annually.

Psychiatric teaching centers about the five medical schools located in the city: the University of Pennsylvania, Jefferson Medical College, Temple University, Women's Medical College, and Hahnemann Medical College and Hospital. Such a tremendous volume of patients furnishes an unlimited amount of material for study and research. The Pennsylvania Mental Hygiene Committee of the Public Charities Association was founded in 1913 and has rapidly increased its functions to the present date.

The following series of brief papers were contributed by the representatives of the various psychiatric organizations in the city of Philadelphia in order that members of the Association might have an opportunity to survey the psychiatric facilities of the city and district at the time of the annual meeting.

THE PENNSYLVANIA HOSPITAL.

In different ways and in different places the Pennsylvania Hospital has been engaged in psychiatry since 1751. In the petition of that year to the Assembly of the Province of Pennsylvania, which led to the granting of the hospital's charter, it is interesting to note that the "distempered in mind" were mentioned ahead of the "sick and injured inhabitants." Of the two patients admitted on the first day after the doors were open—February 11, 1752—one was a "lunatick." From this opening date to 1841 there was maintained a constantly overcrowded service for mental patients in a general hospital. Among the admissions were slaves, "outragious persons," "the reputed daughter of Duke Hamilton," "an irregular person," "a Jew from Lancaster County who is quite distracted," "the wife of Stephen Girard." For them Dr. Rush recommended in 1798 occupational work, and in 1828 the Clerk, Mr. Malin, recommended classification. In 1834 Mr. Malin reviews a most interesting group of occupations and amusements which had been introduced as therapy.

In 1841 the mental patients were moved out of the city to a West Philadelphia farm (44th Street). Here in buildings far ad-

vanced for their day they were under the charge of Dr. Kirkbride, who introduced that most enlightened treatment which is so well described in his series of 42 annual reports.

In 1859 a men's department was completed at 49th Street which incorporated Dr. Kirkbride's later ideas and served mental patients well until 1929 when the men patients were moved back to their original quarters at 44th Street.

In 1884 Dr. John B. Chapin was elected medical superintendent, Dr. Kirkbride having died in December, 1883. Dr. Chapin retired in 1911.

In charge of the men's department, almost a separate institution, Dr. Edward N. Brush acquired under Dr. Chapin from 1884 to 1891 experience which he used to great advantage in organizing the Sheppard Hospital at Towson.

In 1885 the Board of Managers wisely bought a six hundred acre farm at Newton Square, ten miles in the country, to which the mental patients some day may be moved.

In 1911 there was an invigoration of the hospital under the influence of Dr. Owen Copp, who set his face toward the future and planned the changes which since have been accomplished.

In November, 1885, under Dr. Chapin, an out-patient clinic for mental and nervous diseases was inaugurated at the General Hospital where it has continued since, the first service of its kind anywhere.

In December, 1924, under Dr. Earl D. Bond, the Franklin School for Encephalitic Children was begun. It is still caring for about 20 children.

In 1930 the need of applying to normal everyday people the lessons learned from mental patients was met by the opening of the Institute. Here out-patients and resident patients are treated under as little organization as possible. Naturally only those who will cooperate to the maximum can be helped. The chiefs of service are professors at the University of Pennsylvania and much work is done in schools and colleges.

At present, then, the Pennsylvania Hospital activities may be stated briefly as follows:

At Eighth Street a clinic for nervous and mental diseases in a general hospital setting, open five afternoons a week, and a pay clinic open two evenings a week.

At Forty-Fourth Street a department for mental and nervous diseases.

At Forty-Ninth Street the Institute, including the Franklin School, open for out-patients at any time by appointment. The older buildings are occupied as a nurses' home.

REMINISCENCES FROM THE EARLY DAYS OF THE PENNSYLVANIA HOSPITAL.*

By Edward A. Strecker, M. D.

In this day of jazz, cubism, futurism and individualism, historical monuments are not likely to be overwhelmed by attention. It is axiomatic that "the prophet is without honor in his own land" and it is a common observation that we travel thousands of miles to stand on the sacred soil of history while at the same time we may be blissfully unaware of the historical wealth which is at our very doors.

How many of us realize that our own Pennsylvania Hospital is the cradle of American psychiatry? The principal motive which had inspired the founders of the Pennsylvania Hospital as well as the main argument expressed in the petition to the Provincial Assembly afterwards embodied in the Act of May 11, 1751, was "the cure and treatment of lunaticks," in order that "they may be restored to reason and become useful members of the community." It was principally out of consideration for those unfortunate beings who through loss of reason had become "a terror to their neighbors," and for whom no adequate provision had hitherto been made, that the mangers felt the necessity of providing temporarily the building known as Judge Kinsey's Mansion, for hospital purposes. Of the two patients who were admitted on the first day after the doors were opened February 11, 1752, one was a "lunatick" recommended by the Visitors of the Poor of the City.

It soon became obvious that the apartments provided for the insane were in the language of that day "not convenient" and in 1755 building operations were begun, which when completed in 1756 provided better accommodations. That the needs of the men-

* Reprinted from *Annals of Medical History*, New Series, I. 4: 429-434. Permission for publication granted by Dr. Francis R. Packard, Philadelphia, and Paul B. Hoeber, Inc., New York.

tally sick were constantly in the minds of the managers was evidenced by constant improvements in housing conditions, which in 1835 culminated in the following:

Resolved, That in the opinion of this meeting it is expedient that the lunatic department of the Pennsylvania Hospital should be removed from the City of Philadelphia to the country in its vicinity, provided that the removal can be effected upon such a plan as will promote the comfort and improve the health of the patients and admit of the superintendence and control essential to a good administration of the institution.

The cornerstone of the building which now stands at 44th and Market Streets was laid on July 22, 1836, and for many years this building was the model for mental hospitals all over the world. It may not be beside the mark to mention that on September 17, 1928, ground was broken at 49th and Market Streets for the erection of a modern and scientific psychiatric institute.

It is interesting to note that at as early a date as 1756, almost forty years before Pinel began to preach his doctrine of humanitarianism, the Pennsylvania Hospital had provided for the insane not only extensive grounds but also "a gallery eighty feet in length for such of them as may be trusted to walk about, with a place for bathing."

The therapeutics of those early days was complicated and decidedly unpleasant for the unfortunate patient:

The medical treatment appears to have been directed principally to the acute or sthenic forms of lunacy, or cases of so-called phrenzy. These were douched or played upon with warm and cold water; their scalps were shaved and blistered; they were bled to the point of syncope; purged until the alimentary canal failed to yield anything but mucous, and in the intervals they were chained by the waist or the ankle to the cell wall. Under this heroic regimen, some, probably the most sthenic, recovered their reason. There appears nothing in the records to indicate any special mode of treatment for melancolia, or for the stuporous forms of mental disorder. Later there were mentioned certain special appliances for rousing such patients, which judging from the description must have, temporarily at least, effected the desired object.

Restraint was freely utilized. For instance, an account of March 7, 1752, reads as follows:

John Cresson, blacksmith, against ye hospital, 1 pair handcuffs, 2 legg locks, 2 large rings and 2 large staples, 5 links and 2 large rings and 2 swiffells for legg chains. To 3 locks, 13 keys, chains and staples for cells £1.10.3—5 Mo. 25th, 1752. On 5th Mo. 1754 Paid for 7 yds of Ticken for Mad Shirts, £0.16.4½.

To those of us who lose our tempers if a Wassermann report or a blood count is delayed several hours, it may be salutary to recall that in the days of which I am speaking, the managers and physicians were concerned with more or less (and principally less) successful attempts to protect the patients from rats and to furnish them with heat and light. The cells for the insane were without adequate heat for almost 80 years, until 1833. In this connection the historian of that day observes: "The insane were not supposed to require, nor to quite deserve, the usual comforts of life at this period, when even the sane dwelt in cold houses, slept in cold apartments, and sat through the long winter evenings by candle or fire light."

The formalities of admission were exceedingly simple. There was little required beyond the application of a friend or, as has been noted in the history of the hospital, an enemy of the patient, to one of the managers or physicians. The informality of the day may be expressed by quoting a few of the records of admission:

Dr. Moore's Negro man, a Lunatick was received 3rd Mo. 26th, 1753. His master promised payment. 1st Mo. 23rd. 1754. Admitted Negro Adam, a Lunatick and pay patient belonging to Mrs. Margaret Clymer, under the care of Dr. Thos. Bond. 2nd. Mo. 16th, 1754. Black Adam, at ye request of his Mistress Margaret Clymer, was this day discharged. 6th Mo. 26th, 1754. Admitted Negro George, a Lunatick belonging to Mr. Carrington of Barbadoes, a pay patient at 10 s a week, under ye particular care of Doctor Shippen who engages for his board.

It may be interesting to quote from the earlier records and minutes:

May 10th, 1762. The great crowds that invaded the Hospital give trouble and create so much disturbance, that Samuel Rhodes and Jacob Lewis are directed to employ a workman to make a suitable hatch door and get an inscription thereon notifying that such persons who come out of curiosity to visit the house should pay a sum of money, a Groat at least, for admittance.

Later, this rule seems to have fallen into disuse, as, on April 27, 1767:

Orders were renewed that the Hatch door be kept carefully shut and that no Person be admitted into the House without paying the gratuity of Four Pence formerly agreed upon, and that care be taken to prevent the Throng of people who are led by Curiosity to frequent the House on the first day of the week, to the great disturbance of the Patients.

From time to time other measures had to be taken to preserve order. On August 30, 1784:

Dr. Foulke recommended that some regulations may be made in respect to persons visiting the Hospital, particularly in adopting such Rules as would tend to preserve the Lunatic Patients from being interrupted and disturbed in their course of Medicine. Ordered that the Sitting Managers consult with as many of the Physicians as they conveniently can and report such rules and regulations at our next Stated Meeting as will be most conducive to remedy any present Evil on that head which may now exist.

Whereupon, on October 4, 1784:

They Reported that they had found it useful in adopting the following regulations respecting the Lunatic Patients: viz.: The putting up an Advertisement or Rule forbidding more than two Persons at one time to be permitted to go into the Cells and those Persons to be attended by the Cell-Keeper and not suffered to speak to such Patients.

In 1791, as complaints had been made by the physicians that company was too freely admitted, to the great injury of lunatics, it was resolved:

That no Person whatever should be hereafter allowed to enter the Grounds, or Cells inclosed for their Accommodation, unless introduced or allowed by one of the Managers, Physicians or by the Steward, to which resolution the Cell-Keeper was strictly to Attend, and to keep the Gates and Wards locked in future, to prevent all Intruders who might attempt to enter therein, without such permission being first obtained . . .

May 28th, 1758 Admitted, Martin Higgins a Mad person, who having, as many others do without leave, gone through the House to the Top, & there Carelessly and Imprudently running about, fell thence to the ground & was so much Hurt that his recovery was doubtful.

July 28, 1758. Escaped Jacob Ashton by boring thro' the Door of his Cell & forcing out the Steeples of ye Iron Bolts.

August 28th, 1758. Admitted A. D. an Outrageous Person.

January 27th, 1759. Discharged—the lunatick Jane Hughes at the Request of her husband who paid £3 to the Matron in full for her Accommodation. The Damage done to the Cells & c. is Forgiven in Consideration of her Poverty.

January 27th, 1759. Escaped Jno. Jones, a Lunatic; he forced Barrs of his Cell in ye night and fled without Notice.

November 26th, 1759. Admitted Hariott Hamilton a Lunatick, reputed Daughter of the late Duke of Hamilton, to bee in ye Hospital till a Vessel sails.

December 31st, 1759. Admitted Solomon C., a Drunken Mad Man, at the Request of his Brother & by Desire of T. Stampe, ye Mayor, the former agreed with ye Board of Managers for his Maintenance.

In the same year 1759: "Admitted Mark Kuhl junr., an Irregular Person on pay @ Ten Shillings P. Week." Evidently Mark was quite irregular since there is a further notation that " He left the cells irregularly i.e. broke the window and ran away."

William, son of Joseph Hart, a Lunatick and pay Patient. He is also to pay for a Negro man he has to tend him.

Alexander McCurdy—Pay patient, bro't down by ye Overseers of ye Poor of the Townships of New Gulfhahoppen Alias Upper Hanover.

Thomas Dougan, a Lunatick, taken upon the Streets naked the 20th inst. Said to come from ye East Jerseys.

These quaint entries illustrate the kind of cases commonly received and the mode by which they were admitted, as does also the following ancient manuscript order:

City of Philadelphia, ss.:

Several Persons of good Reputation having appeared before me ye Subscriber, one of ye Justices of ye Peace for ye City of Philada. & complayned that Thomas Ackley, Chairmaker, hath frequently behaved in a very disorderly manner to ye great Terror of his Family & Annoyance of his neighbours, Wherefore, Apprehend ye sd. Thomas & take him to ye Workhouse of this City, the Keeper whereof is hereby required to receive & Employ him in ye Common Labour of the House, till further orders.

But if ye sd. Thomas or his Wife shall when he is arrested, request that his Confinement may be at ye Pennsylvania Hospital, in that case deliver him to ye Steward of ye sd. Hospital, or to ye Keeper of Lunaticks there, who shall then receive and safely keep him till he is discharged by proper Authority.

Given under My Hand & Seal December ye 22d, 1763.

To any Constable . . . . . Smauel Rhoads.

Mary, the wife of Stephen Girard, was admitted on December 31, 1790, as a pay patient at a rate of 25 s. per week. The records state:

On the 3rd, Instant, Mary the wife of Stephen Girard was delivered by Dr. Hutchinson and William Gardner of a child, named, in the presence of Edward Cutbush and others, Mary, which on the 7th instant was put out to nurse with John Hatcher's wife, at 10 s. Per Week.

This infant, which was the only child of Philadelphia's great benefactor, died August 26, 1791, aged 5 months and 23 days. Mrs. Girard remained a patient until her death, which occurred September 13, 1815, after she had dwelt continuously in the hospital for 25 years. At the request of Stephen Girard she was

buried in the hospital enclosure. Girard gave the hospital $2000 on October 30, 1815, and bequeathed the institution $30,000 by his will.

I cannot resist retailing a single incident from the life of Polly. a beautiful girl, whose insanity was attributed to disappointment in love. The story has the authority of Mr. Samuel Coates who was one of the managers of the hospital during Polly's residence. I give you the tale in the words of Mr. Coates:

I was walking on the Commons, and heard a great noise. Where it came from I could not tell, but list'ning Attentively, I discovered it was from the blue house, and directing my course there, I found it to be the Shouting of a great number of people. They were Assembled to a Bull baiting, which in those days, was a common practice.

The Animal appeared to be in a great rage, tho' much exhausted by the Dogs, before I reached the Scene of Action. Soon after I got there, a Small Mastiff was sett on, which he threw about ten feet high, & he fell to the Ground with his upper jaw broke & Every tooth Out.

A short rest was now again given to the Bull, when a presumptious little Man, to shew what he could do, run towards the Animal, but Returned faster than he went, for the creature took him under his breech & tossed him about 12 feet from the end of the Rope.

A new pack of dogs being procured to renew the fight, every Eye was turned to the Onset.

At this moment, Polly scaled the high fence, thro' the Cracks of which she saw the battle & pitying the Bull, She pierced unseen thro' the Circle & ran up directly to the Ring; and without Shoes or Stockings on: with her Bosom all open; her neck bare and her beautiful Ringlets wildly dangling over her Shoulders—her other Cloathing was her Shift only and a white pettycoat; so that she appeared more like a Ghost than a human Creature. When She reached the Bull, (tho' previously & almost immediately before, he was in a Rage) She Accosted him thus—"Poor Bully; have they hurt you? they shall not hurt you any more," & stroking his forehead & his face She repeated "They shall not, They shall not hurt thee," This was indeed Wonderful; but the Animal's behavior was not less so, for he no Sooner saw her approaching him, then he dropt his head & became Mild & Gentle, As tho' he knew She was sent to deliver him.

The whole concourse of Spectators saw it, and were Struck with Astonisment—not one of whom dared to enter into the Ring to save her; but stood trembling for Polly's life, afraid to stir a Step and even to follow her on the Return, when she darted thro' the Ring, Thro' the Midst of the dumb Struck Company, like an Arrow from the Bow, Over the high fence again to the Hospital from which she eloped.

The Pennsylvania Hospital extended its gracious and helping arms to the sick in mind before the days of humanitarianism. It

must be remembered that it was the age of man's inhumanity to man. The insane were huddled together, irrespective of sex, and were kept in order by "keepers," who were hired to keep the patients and their cells clean, to perform all the menial drudgery which that involved, to watch the lunatics when they exercised in the yard and keep those who worked about the garden and lots from running away. One of their chief duties was to preserve discipline and order among the unruly. This was done with a strong hand and in a punitive spirit. The insane were chained to rings of iron, let into the floor or wall of the cell, or were restrained in hand-cuffs or ankle-irons; and the straight-waistcoat, or "Madd-Shirt," was in frequent requisition. This was a close-fitting cylindrical garment of ticking, canvas, or other strong material, without sleeves, which drawn over the head reached below the knees, and left the patient an impotent bundle of wrath, deprived of effective motion. In the earlier years it was not considered improper or unusual for the keeper to carry a whip and to use it freely. These methods begat violence and disorder in the insane, who were then, for that reason, a much more violent and dangerous class than they now are, and the keeper's life was neither an idle nor a happy one. From the number of his duties about the house and grounds, unconnected with the care of the insane, it is evident that the patients must have passed the greater part of their time locked up in the cells.

In 1782, a patient, in a letter addressed to the managers, says: "I am Confined here in Chains at the instance of a Relative of my Wife's—I hope you will Desire the Steward to unchain me; but, as his Duty, he could do no less." Later he writes: "The present serves to Inform you that pursuant to your Orders, I am Unchained." The spirit of humanity was doubtless as strong in those early days as it is with us; but the ideas as to what constituted humane care were very different; they were in process of gradual evolution from primitive modes of life and crude social customs to the advanced ideas of non-restraint and kind treatment which now prevail.

From the very beginning the managers sought to lighten the burden of the suffering patients. Always the hospital was in advance of its time. Better physical conditions, separation of sexes, exercise, light, air and sunshine were provided. Dr. Benjamin

Rush had constantly in mind the needs of the mentally sick and at his initiative many improvements were put into operation. It would be pleasant to reflect that the shades of those managers and physicians who in the early days of the hospital labored so effectively against almost overwhelming odds might now be able to realize that their labors were not in vain. Down through the years in unbroken line, other managers, often the descendants of those who gave the hospital its birth have continued to devote their lives to the care of the mentally afflicted; have kept pace with the development of scientific psychiatry but have never departed from that great law of God and man, "Do unto others as you would have them do unto you." It would be good to be able to believe that the first managers of the hospital could know that those who came after them have kept the faith.

FRIENDS HOSPITAL.

By Albert C. Buckley, M. D., Superintendent.

Friends Hospital derived its remote inception from the interest that animated members of the Society of Friends in Philadelphia as early as 1709, although its immediate origin did not appear until proposals were made to the Yearly Meeting of Friends held in Philadelphia in the year 1811.

The contributors' association was influenced by the experience of English Friends in a similar undertaking at the York Retreat by Samuel Tuke, the founder of that institution. There being no institution at the time in this country which could serve as a model, the plan of the York Retreat was closely followed.

As the institution was originally planned "to make provision for such of our members as may be deprived of the use of their reason," it has been conducted since its establishment under the supervision of a Board of Managers, who, by the initial constitution, and present charter, are members of that religious body, and chosen at the annual meeting of the corporation.

As it later became evident that a much wider field of usefulness was open to the institution, all sectarian restrictions were removed in 1834.

Occupation and non-restraint were regarded as twin sisters in the upward movement in the care of the mental patient. "It has

used coercion only as a protective and salutary agency." In the report of 1853, we read: "Thirty-six years ago this revolution may be said to have been commenced in this country and the Asylum was the first erected on this side of the Atlantic, in which a chain was never used for the confinement of a patient." The founders also wrote into the rules the injunction, "Come what may, the law of kindness must prevail."

No feature was more highly valued than occupation, systematically applied and judiciously carried out. In the report of 1825, we find: "Nothing can more strongly establish the usefulness of occupation than the fact that when labor makes a part of the régime, a greater number of patients recover." Much attention is therefore given to devise means for employing their time according to their several capacities.

During the past year new building construction and a general rearrangement of the administrative and medical departments in the main building were completed, thus making available increased accommodation for patients.

Forming a part of the new construction is the clinical and pathological laboratory, divided in two sections for the two types of investigation.

New medical offices for members of the assistant staff, a room for medical records, a conveniently located clinical treatment room, and a staff room containing the medical library, are among the important recent additions.

An assembly room, 35 by 75 feet, of fire-proof construction, is provided on the first floor at the southern entrance to the administrative building, equipped with projection booth and other conveniences for the entertainment of patients.

Below this is a cafeteria of modern design with a capacity for accommodating at one sitting 156 employees, including a separate adjoining dining-room for nurses.

Friends Hospital is among the institutions accredited by the Council on Medical Education of the American Medical Association for supplying internships in neuropsychiatry. Teaching facilities are limited at the hospital because of the private character of the institution. Members of the staff are engaged in university and other teaching capacities in psychiatry and allied subjects.

A school for training of nurses established at the institution in 1894 has since continued its courses without interruption and has a present enrollment of 25 pupils, 19 women and 6 men.

In 1901, a farm of 104 acres was acquired for the purpose of supplying milk and produce to the hospital. In 1916, additional farm land was purchased so that the present farm acreage owned by the hospital consists of 580 acres, situated in Bensalem township, Bucks County, about 10 miles from the institution. Here an accredited herd of 250 cattle furnishes the hospital with milk of certified grade.

On this tract a house has been fitted for the accommodation of 14 patients of the class requiring continued care, who are able to enjoy the comforts of a home-like environment, without the need of active medical supervision.

Since 1893, the accommodations for patients in the hospital have been gradually increased by the addition of separate cottages and additions to the wings of the main building, so that the capacity of the institution has been doubled in the past 40 years. The present normal operating capacity is for 185 patients, allowing vacancies for emergency cases, and for changes in classification of patients in the institution.

THE PHILADELPHIA ORTHOPÆDIC HOSPITAL AND INFIRMARY FOR NERVOUS DISEASES.

By Frederic H. Leavitt, M. D.

The Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases is at the present time situated at the northwest corner of 17th and Summer Streets, the out-patient department occupying the property on the northeast corner. It is contemplated that in the not too remote future the physical property of the hospital will be removed to the grounds of the University of Pennsylvania in the vicinity of 34th and Spruce Streets and that the hospital and its facilities will be used as a teaching adjunct to the neurological department of the School of Medicine of the University of Pennsylvania.

The hospital came into existence in October, 1867, and was incorporated by an act of the Court of Appeals. The purpose of the hospital was to provide for the care and relief of all classes of

persons suffering with bodily deformities, and it was originally known as the Philadelphia Orthopædic Hospital. The original surgical staff consisted of Dr. William Hunt, Dr. Thomas C. Morton, Dr. D. Hayes Agnew, Dr. H. Ernest Goodman and Dr. Samuel W. Gross. Professor Samuel D. Gross and Dr. George W. Norris were appointed as consultants.

During the first year of operation 116 patients were treated but only 5 of this number were admitted to the ward. Of the original number, 31 were cases of club feet; 23 were distortions of the spine and 23 were affections of the joints (14 of these being disease of the hips and 6 of "white swelling of the knee"). There were also 6 cases of knock-knee, while of the remaining cases, 33 were deformities from wryneck, old fractures, contractions of muscles, infantile paralysis, and rickets.

In 1870, Dr. S. Weir Mitchell became interested in the original Philadelphia Orthopædic Hospital because he noted that many of the physical deformities that were seen there were due to affections of the central nervous system. Later that same year the Department for Nervous Diseases was established in connection with the Philadelphia Orthopædic Hospital with Dr. Mitchell as the physician-in-charge. This was the first hospital organized in the State of Pennsylvania to be devoted to the relief of nervous diseases. The first quarters used by the hospital comprised the second story of the building at 15 South 9th Street, Philadelphia.

The work of the hospital rapidly increased in volume and in 1872 the properties at the northwest corner of 17th and Summer Streets were purchased and the corporate name of the institution was changed to "The Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases." Dr. Wharton Sinkler was appointed in 1873 and Dr. William J. Taylor joined the staff in 1884. Dr. William Osler, who afterward became Sir William, Regius Professor of Medicine at Oxford University, joined the staff in 1885 and remained until 1889. In 1884 Dr. Hunt resigned and Dr. William W. Keen was appointed in his place, and it was in this hospital that his pioneer work in the surgery of the brain and nervous system was done.

It is interesting to note from the early records of the surgical department that the original manner of disinfecting instruments was by putting them in a 5 per cent carbolic acid solution, and it

was not until several years later that they began to sterilize instruments by boiling them in copper pans over a small gas stove.

Upon the death of Dr. S. Weir Mitchell in 1914 a legacy that was bequeathed to the hospital in his name was used to purchase the property at the northeast corner of 17th and Summer Streets for an out-patient department, and it is now known as the Mitchell Memorial Clinic Building. In this spacious building are the waiting and clinic rooms for the surgical and out-patient departments and the various baking, massage and hydro-therapeutic quarters of the physio-therapy department. There is also a very well equipped gymnasium for the treatment of deformities and nervous disabilities as well as to aid in the convalescence of the patient. The social service department is also housed in this building. This service investigates the social status and needs of all patients who apply for treatment, and many families are aided through its good ministrations. The social service department is under the direction of Mrs. Ida E. Norton, who is assisted by four full time workers.

The School of Nursing of the hospital was made an integral part of the establishment in 1888. The school is accredited and its graduates recognized by the State Board of Examiners for the Registration of Nurses. During recent years the average number of nurses in training has been between 20 and 25.

In 1888 the department known as the School of Physio-therapy was instituted for the purpose of training men and women in the efficient use of physio-therapy as an adjunct to the treatment of nervous and orthopædic diseases. The school gives a regular series of didactic and practical lectures six days a week for a period of one year and special bedside instruction under the guidance of competent teachers for the same period of time. There have been between 15 and 25 students in attendance each year in this school.

A clinical laboratory was established in 1881 and has grown conjointly with the rest of the hospital. It is under the charge of Dr. E. P. Corson-White, who is assisted by four full time technicians.

The Orthopædic Hospital became justly celebrated through the work of Dr. S. Wier Mitchell and the " rest treatment " for nervous exhaustion, which treatment he brought to a high point of perfection in its wards. From 1870 until his death Dr. Mitchell

devoted every Friday to his free clinic in the out-patient department and he spent many hours in the free wards of the hospital. He devoted hours to a most painstaking investigation of his patients, many of whom came from great distances. It was frequently stated that Dr. Mitchell was more considerate of his charity patients than he was of his private cases. In his handling of the "rest treatment" his directions were most carefully given and they had to be carried out to the most minute detail, and it was in this hospital and under his direct guidance that the best results of this treatment of chronic nervous invalidism were attained anywhere in the world.

At the present time the hospital has 144 beds with 33 private rooms for the treatment of nervous and orthopædic conditions. No actual mental cases are taken unless they are of a very mild type and can be protected by constant nursing attention. There are separate wards for male and female nervous and male and female orthopædic cases, the number of beds for nervous patients being 41 and for orthopædic cases 14. There is a large ward for 25 boys under 12 years of age and another one of similar size for girls. Each child that is admitted is placed in one of a series of small observation wards of three beds each for a period of 10 to 21 days with the idea of preventing infectious diseases from being carried into the larger ward by newcomers.

During the year 1930 there were treated as new house cases 339 surgical and 618 nervous patients, of whom 261 were treated by surgical operation and to whom 17,057 physio-therapy treatments were given. In the surgical out-patient department there were 1088 new cases and a total of 13,750 reported for treatment. In the nervous out-patient department there were 838 new cases and a total of 10,461 reported for treatment. Special clinics were also conducted for arthritis and 2397 visits were made to this clinic. In the "speech defect" clinic there were 137 cases. As adjuncts to the surgical and nervous clinics special out-patient departments for the treatment and investigation of dental, urological, gynecological, eye and ear, nose and throat conditions are functioning.

The house is staffed by three neurological and three surgical chiefs and their assistants, all of whom are on continuous service.

At the present time the surgical services are manned by Dr. William J. Taylor, Dr. Astley P. C. Ashhurst and Dr. A. Bruce Gill and a corps of 11 assistants. The neurological chiefs are Dr. Charles W. Burr, Dr. Francis W. Sinkler and Dr. Theodore H. Weisenburg and a corps of 10 assistants. There is also an attending staff of ophthalmologists, roentgenologists, oral surgeons, laryngologists, urologists, medical electro-therapeutists and bacteriologists. The interne staff consists of a chief resident physician and two neurological and two surgical residents, and all are on a small salary basis. Each neurological and surgical chief conducts an out-patient clinic one day of each week, and the resident physicians attend every clinic in their department.

In no other hospital in the Philadelphia area, with the possible exception of the neurological wards of the Philadelphia General Hospital, is there a greater abundance of neuropsychiatric material. The cases include acute, sub-acute and chronic organic and functional diseases of the nervous system with many cases that fall in the realm of neuro-surgery and of psychiatry. The psychoneuroses, which are so much in evidence at the present time, are found here in great numbers. This abundance of clinical material with its living pathology offers great opportunity for investigation "in vivo" through the medium of the hospital beds, its laboratories, and its facilities for special investigation and through operations. The number of autopsies in proportion to the deaths is relatively high, and these offer further opportunity for the investigation of disease processes beyond the confines of simple theory.

During the past year the merger with the Medical School of the University of Pennsylvania was brought about, and some time in the not distant future the hospital will be an adjunct of that institution where its great facilities for teaching nervous and orthopædic diseases can be used for the benefit of the students of the under-graduate and graduate schools of medicine of the University.

The Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases is distinctly a special hospital and offers unusual opportunity to those students of medicine who are particularly interested in the clinical study of neuro-psychiatry in relation to an out-patient department and an in-patient house service and pathological and research laboratories.

THE PHILADELPHIA HOSPITAL FOR MENTAL DISEASES, BYBERRY, PHILADELPHIA.

By JAMES P. SANDS, M. D., Superintendent.

The Philadelphia Hospital for Mental Diseases is directly under the supervision of the Director of the Department of Public Health and the superintendent of the hospital is responsible to him. This is a different arrangement from that of most large hospitals for mental diseases, as they usually have a board of trustees of 8 or 10 members. The Philadelphia Hospital for Mental Diseases is not only the largest hospital in Pennsylvania, but one of the largest in the United States.

During the past five years all the patients have been cared for in the northeastern part of the city at Byberry. Previous to that time about half of the mental patients were cared for at 34th and Pine Streets. On December 31, 1931, the number of patients actually in the hospital was 2526 women and 2466 men, a total of 4992. On December 31, 1926, the hospital population was 3752, the five-year period showing an increase of 1240 patients. The city of Philadelphia is also maintaining about 1933 patients, at a cost annually of about $343,148, in different state hospitals.

The patients are divided into three groups. The women's group is located on the north side of the Lincoln Highway and the men's group on the south side, about one mile apart. The Philadelphia Institution for Feeble-Minded is located just west of the women's group and here we have a group of 309 children under 15 years of age.

The women's group comprises an administration building, 12 dormitory buildings for patients, with a central kitchen and dining room, and a storeroom in the basement. The nurses home, housing the nurses and some of the women attendants is also situated in the women's group. In the men's group there are six domitory buildings, and infirmary and a central kitchen. The food is distributed from this central kitchen to the separate dining rooms in each dormitory building. In the rear of this group is located a separate building in which about 100 tubercular patients are cared for. Scattered about the grounds are found old frame buildings in which are accommodated approximately 300 patients who are quiet, able to be up and dressed and out of doors when the weather permits.

There are separate laundries for each group, and two power plants which furnish heat and light for the entire hospital. In all there are over 1000 acres of land at Byberry, 600 of which are under cultivation.

Members of the staff and department heads are as follows:

Superintendent.
Assistant superintendent.
Two chief resident physicians.
Ten assistant physicians.
One pathologist.
Two dentists.
Superintendent of nurses.
Four assistant superintendents of nurses.
One instructress of nurses.
Supervisor of medical social service.
Two occupational therapists.
Two hydro-therapists.
Two physical therapists.
Dietitian.
Storekeeper.
Chief engineer.
Head farmer.
Chief clerk and paymaster.
House agent.

The following table shows the number of admissions, deaths and discharges for the past five years:

Year	Admissions	Deaths	Discharges
1927.....	1481	544	747
1928.....	1316	688	604
1929.....	1455	635	764
1930.....	1653	619	689
1931.....	1690	667	621

Nearly all of our patients are committed on the certificate of two physicians, having been examined in the psychopathic ward of the Philadelphia General Hospital. At the time of their admission to Byberry an examination and admission note are made and the patient is then assigned to the building or ward for which he is best suited. Following this a complete family history, previous personal history, and a history of the present illness are obtained and complete physical and mental examinations are made. Routine laboratory examinations are made by our pathologist. After the case has been completely examined the patient is brought before the entire staff where the findings are thoroughly discussed and a diagnosis and recommendations are made. All patients going out on parole are passed upon by the medical staff. Staff meetings are held four days a week. On the men's side 809 cases were presented for parole. The general medical care of the patients was much more effective during the year 1931 and the general physical health of our men patients was good. We have had no epidemics of con-

tagious diseases with the exception of five cases of typhoid fever appearing in the latter part of the year.

Amongst our employees in the men's department 115 were admitted to the infirmary as bed patients. Their illnesses ranged from gall bladder to pneumonia. Thirty-four employees were treated for accidents. Many patients were brought to the infirmary for emergency treatment following automobile accidents on the Lincoln Highway. There being no general hospital between Trenton and Frankford, our hospital is frequently called upon in emergency, and every possible aid is given. Fifty-two boys from the Shallcross School nearby were examined and treated. A considerable number of these were fracture cases.

A feature of the medical department which has been of particular interest has been the tryparsamide clinic in which paretics and patients with cerebrospinal syphilis have been treated. Prior to treatment eye-ground examinations are made. Two hundred and twenty-three patients in this group were treated during the year. In addition to this clinic an anti-luetic clinic has been conducted; all patients with positive blood Wassermann are receiving courses of bismuth, sulpharsphenamine and neoarsphenamine. We have successfully standardized and controlled a number of diabetic patients. These are put on maintenance diet with insulin, and blood sugars are done weekly. Other medical cases which respond to dietary measures receive the accepted treatment. In this group are included the primary anemias, pellagra, etc.

As a matter of special interest, a group of 10 patients showing catatonic phenomena were treated with thyroid extract for a period of two weeks; of these, one showed marked improvement, four showed improvement in the peripheral circulation and the remainder showed no improvement. In one building a group of 26 disturbed patients were placed under sodium amytal treatment for a period of two weeks. Throughout the treatment they were very quiet and for the most part confined to bed. Daily urine analysis and weight records were kept. Following the treatment they were presented in staff meeting. A good result was found in one case, a fair result in another, and three patients showed slight improvement. No conclusions were drawn from this study. Most of the minor surgery is done by the resident physicians of our staff, but

all major work is transferred to the surgical wards of the Philadelphia General Hospital, 20 miles distant.

In 1925 a cottage type building was opened for the care of patients suffering with tuberculosis and all active cases of tuberculosis are cared for in that building with the exception of occasional hyper-active patients who have to be cared for elsewhere. At the end of 1931 there were 20 men and 25 women with clinically active tuberculosis being treated, and during the year 17 men and 14 women with the disease in its active stages were admitted to the tubercular ward. Eight men and 11 women died of pulmonary tuberculosis during the year 1931.

The laboratory, in charge of a pathologist, was established in March, 1931, and though still in its infancy has shown a decided increase in laboratory work. At present it is equipped to perform the following tests:

Urinalysis; complete blood counts; smears; blood chemistry which includes blood sugar, urea N. creatinin; Van Den Bergh and icterus index; sputum-routine; spinal fluids including cell count, sugar and globulin; phenolsulphonphthalein; gastric analysis.

Even though adequate space has not been provided for post-mortem examinations, we are able to do a limited number. In November the laboratory started the supervision of taking typhoid releases, and at the termination of 1931, 101 were satisfactorily obtained. By the end of this time 250 typhoid inoculations were completed.

One hundred and eighty-three patients representing different groups of mental disorder have been studied to determine the degree of meningeal permeability by the bromide method. This work was carried out to investigate the relationship, if any, of the passage of bromide from the blood out into the cerebro-spinal fluid, in the different psychoses.

Dental Clinic.—In this department we have only two dentists and one dental hygienist to take care of the large amount of work. All new patients are examined and a chart made showing the conditions found and treatment indicated. All broken down and pulpless teeth are extracted, pyorrhea treated and general mouth prophylaxis carried out. Any gold crowns or bridges are X-rayed to determine whether they harbor any foci of infection and if so the

proper treatment is carried out, for in recent years the question of focal infection has been an important one as an etiological factor in mental disease.

Nursing Department.—In this department we have one superintendent of nurses, four assistants, one instructress and 35 registered nurses, and 211 attendants. Our instructress of nurses has been giving a course of some 35 lectures to our men and women attendants and at the end of each course a certificate is given to those satisfactorily passing the examination.

Social Service Department.—During the year this department moved its offices from 1700 Pine Street to larger quarters at 209 S. 12th Street. Our 588 patients on parole report to this clinic once a month, where they are interviewed by the physician-in-charge. Home conditions are investigated in many cases before the patient is allowed to go on parole; family histories are obtained and many other contacts with other social service agencies and hospitals are maintained.

Occupational Therapy Department.—This is a very important department in the functioning of our hospital and helps greatly in the re-adjustment and recovery of many of our patients. Our work shops are all filled to capacity and the work is carried on in many of the ward buildings, even including many patients who are bed fast. All the rugs used on the wards, attendants rooms, dining rooms, etc., are made in the shop. Other activities include reed and raffia baskets, sweaters, plain sewing, spool knitting, crocheting, weaving, painting, beading, tool leather work, silver jewelry work and many other projects for which the individual patient might express a desire.

In the men's department a great deal of repair work is carried on, including beds, blankets, chairs, tables, harness, clothing, shoes, sheets etc. Broom corn was raised and harvested from which 2010 brooms were made. In the mattress shop 478 fiber mattresses, 1371 small fiber mattresses, 53 large hair mattresses, 11 small hair mattresses, 131 rubber covered mattresses, 25 fabrikoid covered mattresses, 62 crib fiber mattresses, 2 hair mattresses, cushions, auto truck seats, aprons, shoe bags, etc., were made.

Physical Therapy Department.—The physio-therapy department in the men's division was greatly evpanded during 1931 and has proved to be a valuable adjunct to the therapeutic management of

many cases. Between 700 and 1000 individual treatments were given in that department each month and a total of 9060 treatments were given through the year compared with 679 given in 1930. The department is equipped to give various forms of electrical and physio-therapy treatments including ultra-violet radiations, infra-red heat (baking), sinusoidal wave currents, galvenism, faradism, diathermy, high frequency currents, hand massage, sitz baths, Scotch douches and cabinet baths. The resident physicians have been urged to make the utmost use of this department and prescription blanks for this purpose were provided and distributed in the wards. A card system was begun on which a complete record of the type, number, date and results of all treatments are kept. Equipment for similar types of treatment was obtained for use in the female division but because of the lack of adequate space and the lack of a trained technician to carry on the work, this department has remained undeveloped.

Hydro-therapy Department.—This department has carried on the work to the limit of its capacity. Additional continuous baths for the quieting of excited, maniacal patients are badly needed together with additional trained personnel so that this department could render 24-hour service. We have at present only 10 tubs for continuous baths, six in the men's department and four in the women's department, and three Baruch hydro-therapy units. In the men's division 6154 treatments, including continuous baths, douches, with showers, salt glows and cold sheet packs, were given in 1931. Certain recreational activities were also supervised by the personnel in this department, including basketball, baseball, socker, quoits, etc.

Roentgenology Department.—Due to the lack of a trained roentgenologist on our staff, this department has remained only partially developed. The equipment consists of a Victor stabilized fluoroscopic and radiographic unit together with a separate Potter-Bucky diaphragm for head work and the necessary dark room equipment for developing and fixing plates, all of which is in good repair and adequate for the present needs of the hospital. The equipment has been operated by two of the staff physicians. Three hundred and thirty-nine X-ray examinations were made and a considerable number of fluoroscopic examinations carried out. All patients sustaining fractures or having suspected fractures were

X-rayed and all injured employees in which a fracture was suspected were X-rayed. A number of chest pictures were taken in cases of active or suspected tuberculosis, and one encephalographic study was made.

Farm Department.—We have under cultivation over 600 acres of land. For the year 1931, 204,939 quarts of milk were produced and the poultry production was: eggs, 19,591 dozen; chickens, 9799 pounds; ducks, 1379 pounds; geese, 554 pounds.

Perhaps one of the most important products of the farm is the benefit to the patients who are assigned to the various farm activities; this is as valuable as any form of therapy.

Lectures have been given, and clinics demonstrating the different types of psychoses were held for classes from the psychological department of Temple University. Many of our patients are sent to clinics for demonstration purposes for medical classes from both the University of Pennsylvania and Jefferson Medical College.

With our 5060 mental patients and 309 children in the Philadelphia Institution for Feeble-Minded we have a wealth of clinical material and it is hoped that our hospital will soon be properly equipped and staffed so that a more thorough study and research may be made of this material.

THE PSYCHIATRIC DEPARTMENT OF THE JEFFERSON MEDICAL COLLEGE.

By M. A. Burns, M. D.

The Department of Nervous and Mental Diseases of the Jefferson Medical College was created in 1892 when Dr. Francis X. Dercum was elected to the position of clinical professor. In 1900 he was appointed to the newly created full chair, a position which he held with the greatest distinction until his resignation in 1925. From then until the time of his death on April 23, 1931, Dr. Dercum was Professor Emeritus. He wrote a vast number of medical articles, addresses, chapters in Systems and books, and participated in a multitude of discussions in societies. During his years at Jefferson, Dr. Dercum did considerable research work in both nervous and mental diseases. He was frequently called into court to testify as an expert, but he was able so to guide himself by the compass of truth as to retain the highest respect of the medical profession.

Dr. Dercum gave psychiatric lectures to the senior class every Tuesday afternoon at five o'clock during the many years of his connection with Jefferson. These lectures were masterpieces in the art of teaching mental disease. Later in his career, Dr. George E. Price was associated with him in this work. Dr. Dercum continued to give the psychiatric lectures on Tuesday afternoons throughout the college term, Dr. Price giving the clinical lectures in psychiatry at the Philadelphia General Hospital, where he showed cases suffering from definite psychiatric conditions, entities and syndromes. When Dr. Price left Philadelphia in 1919 to practice psychiatry in the State of Washington, his place was filled by Dr. Sherman F. Gilpin, who gave the clinics at the Philadelphia General Hospital from that time until Dr. Dercum's resignation in 1925.

In the years of his rôle as teacher, Dr. Dercum developed many neuro-psychiatrists among his students, and today a large number of specialists in nervous and mental diseases can look back to the days of their early training at the Jefferson Medical College under a most able teacher.

Dr. Dercum held a unique position, not only in this country but abroad. He became a foreign corresponding member of the Neurological Society of Paris, a member of the Royal Society of Budapest, a corresponding member of the Psychiatric and Neurological Society of Vienna, and in 1922 the Government of France created him a Chevalier of the Legion of Honor. He was a member of the Wistar Association; he served in the Medical Reserve Corps during the World War, and at the time of his death was president of the American Philosophical Society. Among his many publications were a clinical manual on mental diseases, a book upon the physiology of the internal secretions, one upon rest, one upon the physiology of the mind, one upon hysteria and accident compensation.

In order to advance the cause of psychiatry at Jefferson, Dr. Dercum created a society which was honored by his name. The Dercum Society was organized for those undergraduates who had a particular interest in neuro-psychiatric problems, so that they might further develop their interest and knowledge of this specialty. Meetings were held monthly under the guidance of Dr. Dercum, and lively discussions took place on unusual phases of mental

disease. At these gatherings undergraduates were taught how to present cases and how to discuss various aspects of these cases; Dr. Dercum also taught them at first-hand the responsibility and obligation of the medico-legal witness. His code of ethics was very strict, and he strove to impart his high standards to the members of the society and the student body. Because of the greatness of the man under whom they were privileged to learn, Dr. Dercum's students carried away with them an appreciation of his ability and character.

Upon his resignation in 1925 Dr. Dercum was succeeded by Dr. Edward A. Strecker, a graduate of the Jefferson Medical College, and one of Dr. Dercum's former students. Dr. Strecker continued the neuro-psychiatric work at Jefferson as his predecessor would have wished. The Tuesday afternoon lectures in psychiatry were given regularly throughout the college year, and in discussing his subjects Dr. Strecker brought to the attention of the students the latest scientific discoveries in neuropsychiatry. The clinical lectures at the Philadelphia General Hospital were also given by Dr. Strecker. They grew very popular with both the undergraduates and graduate physicians, and it became necessary to issue cards of admission so the student body of Jefferson might be able to gain entrance to the lectures. The Dercum Society of Jefferson continued under the name of the Strecker Society, the meetings, as formerly, being devoted to interesting conditions in neuropsychiatric work. In Dr. Dercum's time as well as in Dr. Strecker's day, the meetings of the society developed such an interest in neuropsychiatry that outstanding psychiatrists were eager to respond to invitations to appear before the members.

Like his predecessor, Dr. Strecker was exceptionally well qualified to teach psychiatry and neurology. Before his appointment to the Professorship at Jefferson, Dr. Strecker had been connected with the Pennsylvania Hospital for Nervous and Mental Diseases from the time of his graduation from the Jefferson Medical College in 1911. His contributions to psychiatric literature have been many; among his foremost publications are his "Clinical Psychiatry" (in collaboration with Ebaugh), "Clinical Neurology" (in collaboration with Meyer), and his recent volume, "Discovering Ourselves" (in collaboration with Appel). This latter book

was written for laymen as well as for the profession, and has had a nation-wide circulation.

While adhering to Dr. Dercum's method of teaching and to the hours devoted to the instruction of psychiatry at Jefferson, Dr. Strecker instituted a new practice whereby each student was assigned a case, took his own history of the case, made his own examinations and attempted to reach a diagnosis and formulate a course of treatment. Each senior student was held responsible for such a case history; and his report was considered part of his final mark in neuro-psychiatry, thereby bringing the instruction in psychiatry to a high point of efficiency.

In the senior year the teaching of psychiatry consists of 32 didactic lectures, given at the Jefferson Medical College, and 15 psychiatric clinics held at the Philadelphia General Hospital. Special demonstrations to small groups are given throughout the year, and individual contact between patient and student is made possible through the case reports submitted by the seniors. The course of lectures in psychiatry to the seniors consists of an introductory lecture on the history and theory of psychiatry, etiology, classification of mental diseases, method of examination and symptoms, the organic psychoses, the toxic psychoses, the manic-depressive group, the involutional and pre-senile psychoses, dementia præcox, paranoia and paranoid conditions, the psychoneuroses, the constitutional psychopathic states, mental deficiency, normal psychology and psycho-pathology of childhood, psycho-analysis, and the medico-legal aspect. The course also includes slides on neuro-anatomy and neuro-pathology.

Psychiatric training begins in the junior year with clinics in mental hygiene and child guidance, these clinics being conducted by Dr. Baldwin L. Keyes. The course consists of a clinic one hour each week, a total of 36 hours, and lectures in child psychiatry and mental hygiene are given one hour weekly for 36 weeks. Optional work is offered in the psychiatric clinics two hours every week. These lectures and clinics cover the following topics: nervous disorders of children, endocrine disorders, conduct disorders, the pre-school child, the school child, puberty, adolescence, feeble-mindedness, the psychoses, the neuroses, conduct disorders from the mental standpoint, conduct disorders from the functional stand-

point, convulsive states, medico-legal cases, medico-legal problems and, finally, the doctor and the patient.

Each year the teaching of psychiatry and mental hygiene at Jefferson is becoming more elaborate, and since the establishment of the new Curtis Clinic greater opportunities have been available both for the training of the undergraduate body and for research work.

In June, 1931, Dr. Strecker withdrew, and since then the work of the neuro-psychiatric department has been carried on by the Associate Professor of Nervous and Mental Diseases, Dr. M. A. Burns, and the Assistant Professor, Dr. Sherman F. Gilpin, together with a corps of 10 trained neuropsychiatrists. These men are in constant contact with the students—in classwork, in section work, in bedside training and in case report work.

THE PENNSYLVANIA MENTAL HYGIENE COMMITTEE OF THE PUBLIC CHARITIES ASSOCIATION.

By LeRoy M. A. Maeder, M. D., Medical Director.

The Pennsylvania Mental Hygiene Committee was organized March 24, 1913, as a division of the Public Charities Association of Pennsylvania. During the first decade of its existence the committee concentrated its efforts chiefly upon the objectives of the mother association in the development of an adequate and far-sighted program of preventive and curative work for dependent mentally ill, feeble-minded, epileptic and other socially handicapped men, women and children in Pennsylvania.

In 1913 a law establishing the State Village (for feebleminded women of child-bearing age) at Laurelton, Union County, was sponsored. In 1914 a six months' survey of all the state institutions for the mentally ill was carried out by the late Dr. C. Floyd Haviland and the report circulated throughout the state. In 1915 an act was initiated providing for the erection of a new State Mental Hospital at Torrance in Westmoreland County. During the same year a vigorous campaign was waged for adequate appropriations for the development and maintenance of the Laurelton State Village. In 1916 the committee and the mother association sponsored a survey and published the report by Dr. Wilhelmina E. Key on the mental defectives in a typical locality in Pennsylvania; brought

about improvements in various institutions for the mentally ill by friendly suggestions to superintendents and other officials; and prepared a travelling exhibit on feeblemindedness with a view to arousing the people of Pennsylvania to a full appreciation of the importance of making adequate provision for segregation of mental defectives. By actual count more than 250,000 adult citizens visited this exhibit which was largely instrumental in bringing about the development and opening of the Laurelton State Village. In 1917 the committee organized mental health clinics in Philadelphia, Reading, Harrisburg, Lancaster, York, Chester, and other cities, as a demonstration in the prevention and cure of mental disease; and sponsored an amendment of the School Code to provide special instruction for exceptionally handicapped children, under plans approved by the State Departments of Health and Public Instruction.

The committee had at this period on its staff a full time psychiatric social worker who devoted the greater portion of her time to the social problems of mentally incapacitated soldiers, working in conjunction with the Red Cross. At the same time an intensive program of education and investigation in the field of mental hygiene was carried on. In 1918 the earlier Haviland survey was supplemented by a study of state and county hospitals for the mentally ill by Dr. William C. Sandy. In 1919 a "sifting" survey of 12,000 school children of Chester County, as to school retardation and other mental problems and a similar survey of children at Mt. Alto State Tuberculosis Sanatarium, and of children of other typical districts were made. In September of the same year Dr. E. Stanley Abbott was appointed the first Medical Director. In 1920 plans were projected for the creation of the State Welfare Department, in which is included the State Bureau of Mental Health.

During this latter period Dr. Abbott assisted the Commission to study and revise the laws relating to mental health and defect. Dr. Owen Copp and Dr. Charles H. Frazier, members of the Comsion, contributed valuable assistance and support to this work. The fruit of these labors was the enactment of the Mental Health Act of 1923 dealing with the "prevention and treatment of mental diseases, mental defect, epilepsy, and inebriety; regulating the ad-

mission and commitment of mental patients to hospitals for mental diseases and institutions for mental defectives and epileptics; governing the transfer, discharge, interstate rendition, and deportation of mental patients; providing for the payment by individuals, counties, or the commonwealth of the cost of the admission, care, and discharge of mental patients; and imposing penalties."

In 1923 the committee was reorganized on a more autonomous basis with a clear-cut program of its own, but still retaining in all essentials its original organic relationship to the Public Charities Association. The committee, as a whole, works hand in hand with the mother association in legislative matters and other concerns of state-wide interest. In 1925 and 1927 it energetically backed a resolution to amend the Constitution of Pennsylvania so as to authorize the state to issue bonds not to exceed $50,000,000 to finance a 10-year program for construction of state-owned institutions for mental defectives, epileptics, persons mentally diseased, penal offenders and delinquents. The resolution passed two successive sessions of the legislature, but failed to secure the approval of the people. Ten million dollars has, however, been appropriated by each of the two succeeding legislatures for these purposes, probably largely as a result of the great public sentiment aroused in behalf of these institutions during the campaign for the bond issue. Following an intensive educational campaign, the 1931 Legislature approved and the Governor signed a bill providing for the establishment of the Western State Psychiatric Hospital in Pittsburgh and appropriating $25,000 for preliminary plans and estimates.

The Pennsylvania Mental Hygiene Committee is composed of three sections—Western, Central and Eastern—each autonomous in its geographical area. The Eastern Section is charged with responsibility for the local program of mental hygiene in Philadelphia and the southeastern part of the state. It is composed of 46 physicians actively engaged in or deeply interested in psychiatry and mental hygiene, and four non-medical members. The lay membership of the section will be greatly augmented in the near future.

The Eastern Section has held regular monthly meetings in Philadelphia since the reorganization in 1923. One of the early projects of the section was a demonstration child guidance clinic, financed by the Commonwealth Fund of New York. The clinic, known as

the Philadelphia Child Guidance Clinic, successfully completed its two-year demonstration in 1927 and is continuing with the support of local funds.

Education of the medical profession, professional groups and the public in the principles of mental hygiene has always been a major objective of the Eastern Section.

In 1930, which would serve as a fair example, the committee sponsored the following educational program:

84 Newspaper articles published.
67 Articles published in periodicals.
29 Radio talks.
35 Addresses and lectures.
5 Round table discussions.
3 Courses, a total of 29 lectures.
3 Meetings of the state-wide committee.
1 Symposium on "Epilepsy" before the Philadelphia County Medical Society.
1 Post-graduate seminar on "The Scope and Basis of Insanity" before the Philadelphia County Medical Society.

For the past six years the Eastern Section has conducted a weekly radio talk on mental hygiene. These talks are now being given under the joint auspices of the committee and the Philadelphia County Medical Society.

For the past two years the Eastern Section has cooperated with the Pennsylvania School of Social and Health Work in presenting a series of eight lectures on mental hygiene to the senior nurses from the hospitals in metropolitan Philadelphia. The section cooperated closely with the Philadelphia Hospital and Health Survey in 1929 and arranged for the collection of the data which constituted the Mental Hygiene Section of the Survey Report.

On May 3, the committee entertained the delegates to the First International Congress on Mental Hygiene at a dinner at the Hotel Bellevue-Stratford in Philadelphia. The principal addresses on this occasion were made by Sir Maurice Craig, of London; Dr. August Ley, of Brussels; and Dr. Jur. Lothar Frede, of Weimar.

In 1931 six members of the Eastern Section served on the Mayor's committee to conduct a survey of the Philadelphia Hospital for Mental Diseases at Byberry.

The chief purposes of the committee may be briefly outlined as follows:

To educate the public—through addresses, radio talks, moving pictures, exhibits, literature and magazine and newspaper articles—as to the nature, extent, causes, treatment and means for prevention of mental and nervous diseases, disorders and defects.

To promote the establishment and effective operation of free clinics for mental diseases, disorders, and defects, especially in connection with state and other hospitals.

To promote remedial and preventive legislation and to bring to the attention of the public and the proper officials the essential facts about the prevalence of mental and nervous diseases, disorders and defects and about the financial and other needs of the state institutions for the mentally diseased, the epileptic and the feebleminded.

To institute courses of instruction in the recognition of the elementary problems of mental health for groups of teachers, nurses, social workers, visiting teachers, college and medical students.

To conduct studies in various communities to determine the extent within their borders of such mental health problems as mental diseases, delinquency, feeblemindedness, etc., with a view to securing proper treatment facilities for attacking these conditions.

To study the problem of mental hygiene in its different phases and to stimulate others to such study.

The outstanding objectives of the Eastern Section for 1932 are:

Joint action with the Public Charities Association and its Citizens' Committee for the State Welfare Building Program in its program of fact finding and educational activity in connection with the state institutions for the mentally ill, feebleminded and delinquent.

Close cooperation with the Mental Hygiene Committee of the Medical Society of the State of Pennsylvania and with the State Bureau of Mental Health in arousing the interest of the general practitioner in the maintenance and construction needs of our mental hospitals, and in the mental hygiene program in general.

Development of the new Cumberland Valley Institution for Male Defective Delinquents.

Development of the New Selinsgrove State Colony for Epileptics.

Improved facilities for the Philadelphia Hospital for Mental Diseases at Byberry, with continued effort to effect the transfer of this hospital to the Commonwealth for operation as a state mental hospital.

Outlining the need of Philadelphia and the southeastern section of the state for a new state mental hospital and a state psychiatric hospital in this area, and efforts to secure the establishment of these institutions.

Development of an adequate psychiatric service for state and county prisons in this area.

Promotion of increased clinical psychiatric facilities for various communities in the southeastern section of the state through the establishment of mental hygiene and child guidance clinics, and provision for the care and treatment of early and borderline mental cases in general hospitals.

Broadening of the scope of the eastern section through increased lay membership, close cooperation with other agencies and groups interested in and engaged in the field of mental hygiene, and the organization of local affiliated mental hygiene committees in this section of the state.

INSTRUCTION IN PSYCHIATRY AT THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE.

By KENNETH E. APPEL, M. D., Assistant Professor of Psychiatry.

Before presenting an outline of the organization of the course of instruction in psychiatry in the School of Medicine at the University of Pennsylvania, it might be well to make a brief statement of the philosophy behind that course.*

Undergraduate instruction is for the purpose of training general practitioners, not specialists, therefore a highly specialized course in formal psychiatry or psychiatric specialties (child guidance or psychoanalysis) is not given. It is recognized that well-defined psychoses occur in probably not over 5 per cent of the cases in general practice. Therefore it seems unwise to devote 70 per cent of the instruction to the classification and treatment of psychotic conditions. On the other hand it is believed that 60 or 70 per cent of the work of a general practitioner in his first 10 years of practice concerns various functional conditions and neuroses. These conditions are not isolated, but frequently complicate organic conditions. The psychiatric segment of general medicine may be arranged in the order of frequency roughly as follows:

A preponderance of the neuroses—hysteria and neurasthenia, psychasthenia or compulsion neuroses, and anxiety states.

Neurotic additions to organic disease.

Psychiatric ramifications of chronic disease.

Convalescence—the importance of psychological problems and the prevention of neurotic sequelæ.

Behavior disorders and psychopathology of children.

Frank psychoses.

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*Strecker, E. A.: Psychiatric Education, the American Foundation for Mental Hygiene, May, 1930.

The general practitioner certainly should know that some cases which appear to have neuro-circulatory asthenia may have nothing *essentially* wrong with their cardio-vascular mechanism and that therapy may be successful if, for example, certain marital difficulties are understood and adjusted from the psychological point of view. Or a case of apparent hyperthyroidism may have its roots in the psychological insecurity of family relations. The prevention of pessimism and despair in certain cases of angina pectoris, for example, can transform the patient from a helpless and almost suicidal invalid to a cheerful and useful human being. Convalescence from an attack of indigestion following a dietary indiscretion is often very important from the psychological point of view in patients who already have been under prolonged emotional strains. The puerperium is an important period not only physically but psychologically for the mother of many children in narrowed economic conditions. How often such patients unconsciously tend to keep a few symptoms and use them automatically to bolster up certain unsatisfied longings. Convalescence in childhood may transform a former normal and considerate child into a veritable tyrant whose domination and obstinacy, temper and lying, may seem to indicate an entirely new personality. Surely certain feeding difficulties in childhood, enuresis, and fears, have psychological and therefore psychiatric implications for the pediatrician. Temper tantrums, enuresis, sullenness, unexplained crying spells, lying, fears, " fainting," masturbation, torturing animals, seclusiveness, setting fire, jealousy, truancy from school and home, retardation in school, thumb sucking, lying, stealing—are surely psychopathological manifestations for which our ordinary concepts of neuro-anatomy or pediatrics afford no understanding nor line of therapy. The patient who fears he will kill his wife cannot be explained or helped with the use of ordinary pathological or medical knowledge. The knowledge that a wife had discovered certain fundamental dissatisfactions in her husband makes understandable the delusion that her husband is no longer her husband. The most refined medical knowledge of brain anatomy, neurophysiology, and endocrinology, cannot throw light on such a symptom. The same applies for example also to the homosexual who has hallucinations accusing him of immoral practises.

Neuropathology cannot be neglected. The organic aspects of psychiatry must be stressed as, for example, in paresis, arteriosclerosis, and senile degeneration of the brain elements, conditions which are common in the experience of the general practitioner. There need be no quarrel between the organicists and functionalists. But in so many cases the concepts of anatomy, histology, neurology, chemistry, endocrinology, and even academic psychology, do not help us. So often they do not meet the demands of conditions we meet in practise. Therefore we must use psychological and psychiatric concepts and formulations. "Mental processes ought to be studied not solely as functions of the structural brain, but also as conscious and unconscious mechanisms which operate not only in mental disorder, but in our everyday life." (Strecker.) Many of the problems of ordinary medical practise can only be understood as a reaction of the total personality (not merely the body and its physiology) to its environment—not merely the infectious environment, but the economic, occupational, and social environment.

With this point of view as a background the teaching of psychiatry at the University of Pennsylvania has been organized as follows: There are three chief divisions of instructions, viz., *Correlation Clinics, Systematic Lectures* and *Demonstration Clinics; Clinical Bedside Work.*

The *Correlation Clinics* are given by Dr. Earl D. Bond, Professor of Psychiatry. In the first and second years of the medical course, clinics are given each week by members of the Medical Department to orient students in the midst of their laboratory studies, with reference to clinical conditions. The Department of Psychiatry has been asked to share in these clinics up to the extent of 10 in each year. In these *Correlation Clinics* it is intended to stress the importance of psychological factors: the etiology, diagnosis, and treatment of medical illnesses.

The *Systematic Lectures* and *Clinical Demonstrations* are given by Dr. Edward A. Strecker, Professor of Psychiatry, and Chairman of the Department. The lectures are given to the senior class one hour a week throughout the year. The course is a required subject and an examination is held at the end of the year. Systematic and formal lectures are given only to the extent of six or

eight, in order to orient the student in the field of psychiatry and to emphasize certain important subjects, for example, the diagnosis and treatment of paresis. A few visiting lectures are given by distinguished psychiatrists. The rest of the year is devoted to clinical lectures on demonstration cases—the order of emphasis is progressively on symptoms, classification, etiology, and pathology—considering both the organic and psychogenic aspects. Nosology is not emphasized. But every effort is made to understand the man as an individual, an organism, and a personality, whose physiological and psychological factors must be investigated in order to understand the presenting condition. His total reactions—structural, physiological, emotional, psychological, social—must be studied in order to understand the illness and apply rational therapy. Disease, maladaptation on any level, affect the total personality. Even the exaggerated reaction of the psychotic presents points of analogy with the neurotic, and the lesser difficulties of common everyday maladjustments of normal people. The aim is to give the student going into general practice or non-psychiatric specialties insight which will help him in his treatment of patients. In no sense is the work planned for those going into psychiatry.

The *ward work* by the students is divided into three trimesters. A section consists of 10 periods once a week of two hours each. The section work is done at three hospitals, viz., the Philadelphia General Hospital, the Pennsylvania Hospital for Nervous and Mental Diseases, the Neuro-Psychiatric Out-Patient Clinic of the Pennsylvania Hospital, and occasionally in the Institute of the Pennsylvania Hospital. The purpose of this work is to enable the students themselves to have intimate contact with patients. They observe how psychiatric or mental examinations are made, by observing a psychiatrist make a number of examinations. The students themselves learn to make such examinations and they write summary reports of the patients thus examined. These reports are examined by the psychiatrist in charge of each section, and the report is read before the whole group for comment and criticism. This section work is an integral part of the course and the students receive marks for the work they do in it.

For students who have had some experience in psychiatric hospitals special arrangements are made. They study more extensively

individual cases. Reports are also made before the whole section on assigned reading from psychiatric journals or books on points of interest and value for the understanding of patients.

THE WOMEN'S MEDICAL COLLEGE.

Psychiatric teaching at the Women's Medical College was organized in 1901 as a sub-department of medicine. This division in the teaching of all of the specialties is uniform throughout the medical school; that is, the sub-division of the various departments under medicine.

The psychiatric teaching is closely correlated with the medical and pediatric departments and much of the lecturing and clinical work is carried on directly in the medical and pediatric clinics by the psychiatric staff. There is concentration in the medical department of social psychiatry and in the pediatric department of mental hygiene, child guidance, and juvenile problems. The major portion of the psychiatric clinical work is carried on at the Philadelphia General Hospital where both neurological and psychiatric clinics are conducted one hour a week throughout the school year.

Norristown State Hospital furnishes eight hours of clinics and case work to the medical students. There is no special psychiatric clinic but a psychiatrist is present in each of the pediatric and medical clinics. Cases with psychiatric problems are referred directly to the psychiatrist in attendance at these clinics. The psychiatric teaching is well distributed over the four year's medical course. Freshmen students receive lectures in medical psychology and mental hygiene. In the junior year the psychiatric teaching is correlated with the pediatric lectures and a series of lectures in child guidance are delivered by the psychiatric staff. In the senior year there are twenty hours of lecture and quiz in straight psychiatry in addition to the clinical and case work at Norristown and the Philadelphia General Hospital. Dr. Alice E. Johnson holds the chair of clinical professor of psychiatry and the greater share of the teaching is done by her personally.

TEMPLE UNIVERSITY SCHOOL OF MEDICINE.

The chairs of neurology and psychiatry were separated in the year 1928, there now being a department of psychiatry. The lectures in psychiatry are given at the Philadelphia General Hospital,

to the entire junior class on every Wednesday morning throughout the school year. Wednesday afternoon two sections of the senior class spend two hours in a smaller classroom in clinical conferences in analyzing cases from the ward.

Students have taken advantage of going through the wards and examining cases at the bedside with the professor of neurology and his assistant. Ambulatory mental cases are constantly found in the wards of the general hospital. These cases are thoroughly gone over and demonstrated by the neurology staff before sending the patients to the Hospital for Mental Diseases.

Professor Spiegel of the Department of Neuro-Physiology is also doing research work to evaluate wherever possible, the pathology in mental diseases. Senior students have the privilege of following these investigations in the research department.

The library of the school contains representative works on modern psychiatry to which the students of the University have access. Dr. Max H. Bochroch holds the Chair in Psychiatry in the School of Medicine at Temple University.

PHILADELPHIA CHILD GUIDANCE CLINIC.

By Frederick H. Allen, M. D., Director.

The Philadelphia Child Guidance Clinic was started in June, 1925. In the community it was sponsored by a representative group of medical men, educators, social workers, and prominent lay people interested in developing facilities to take care of the mental health problems of children. During the first two years of its operation it was financed by the Commonwealth Fund of New York City and supervised by the Staff of the National Committee of Mental Hygiene. Since 1927 it has been financed locally, first by subscription and later from funds of the Welfare Federation.

This clinic has always operated with a full time staff. This has consisted of two psychiatrists, two psychologists and from seven to nine social case workers.

Cases have been referred to the clinic from all parts of Philadelphia and from all economic and social levels. From the beginning approximately half of its cases have been carried on a cooperative basis with various social and health agencies in the community. On such cases the social worker of the cooperating agency works

closely with the clinic staff in the treatment of the case. The other half of the cases come mainly from schools and directly from parents. For those parents who have been able to pay, a fee has been charged in accordance with the financial ability of the family and with the amount of work required of the clinic. This plan has been in operation for the past three years and has been working out very successfully, although the earnings do not represent a large proportion of the clinic income.

The clinic handles approximately 400 new cases each year and carries over from the preceding year about an equal number of cases that are still being treated. Children up to 16 have been accepted and in a few instances older cases have been received. As a general working rule the clinic accepts the younger group and the Institute at the Pennsylvania Hospital deals with those over 16.

One of the most important activities of the clinic has been its cooperative relationship with other social and health organizations, a great variety of which have used the clinic. They have represented many different types of approach to the problems of human behavior and this has given the clinic an opportunity to broaden its own concepts by participating on a joint case work basis with each worker from the fields represented. In attempting to share closely the experiences of these workers representing so great a range of interests and purposes, the clinic has assumed a responsibility for understanding sympathetically the method and aims of each. Such understanding has proven to be the foundation of effective cooperative work. Study and treatment of each cooperative case has been made the occasion of a mutual venture to which agency and clinic each contributed the result of their different experiences. This work has enabled the clinic to be closely related to a variety of activities in the community and through such activities has become more effective in its work.

From the beginning the clinic has emphasized treatment as one of its major functions. It is the aim not only to diagnose but to carry the individuals long enough to bring about a better understanding of the factors which are responsible for the difficulties. For this reason the clinic has encouraged the community to refer those cases amenable to treatment. No hard lines are drawn, but only a small number of seriously defective children have been referred during the seven years of operation.

Another important clinical activity has been the training of personnel, particularly psychiatrists and social case workers. This training has been carried out partially in cooperation with various educational resources of the community and partly through fellowships granted directly to the clinic. Through staff connections the clinic has teaching relationships with the University of Pennsylvania Medical School and the Graduate School of Medicine, Smith School for Social Work, Pennsylvania School for Social and Health Work and Bryn Mawr. The Commonwealth Fund has granted the clinic training fellowships for psychiatrists. It has been the logical development that a clinic that does stress treatment should be utilized as a training center. It gives the students an opportunity to see their cases over a period of time, which is a very essential point in any training program. In addition to the formal training which is given at the clinic, staff members are used in the community to give courses and lectures on subjects related to the mental health of children.

THE PSYCHIATRIC CLINIC OF THE COMMUNITY HEALTH CENTER.

By Bernard J. Alpers, M. D.

The Psychiatric Clinic of the Community Health Center is situated in the Federated Jewish Charities Building at 330 South 9th Street. It forms part of a larger group of clinics which includes medical, dental, psychological, psychiatric and other clinics. The agency is entirely cooperative, deriving its clients from social agencies situated in the building and to a less degree, elsewhere. There are three part-time psychiatrists, of whom one is in charge of the psychiatric policies of the clinic. These psychiatrists give three half-days clinics each, so that in all there are about nine clinics of three hours or longer given by each man. In addition, there is a full-time psychiatric social worker, a psychologist directly connected with the clinic and an executive secretary, who has charge of all the clinics connected with the Community Health Center.

Cases referred to the clinic pass first through the hands of the psychiatric social worker, who discusses them with the worker referring them and submits them for the psychiatrist's opinion as to suitability for psychiatric therapy. In so far as possible, cases

are selected on the basis of hopefulness in treatment. This is not possible, however, in every case, as a goodly number pass through the clinic without intensive follow-up treatment. The types of case vary a good deal. There are a large number of children's cases, most of which resolve themselves into child guidance problems, and there are as well many adults. Of the children's cases, there are many behavior problems with not a few of which rather intensive work is necessary. A large number of adult psychoneurotics are also seen at the clinic. It being the policy of the clinic to select cases which merit intensive treatment, excellent cooperation from the agencies concerned is assured, so that there is very little to hinder good thorough psychotherapy where it is indicated. Each case, whether child or adult, receives a complete physical examination; in most instances a psychometric rating, and a psychiatric examination. A considerable number of placement problems are handled in the clinic, some of which are followed through carefully as the situation may indicate. Frequent conferences are held between the various agencies interested in cases, and the psychiatrist, for the purpose of discussing the psychiatric factors as well as for clearing up immediate problems with which the social worker is concerned. These conferences offer excellent opportunity for teaching purposes and have proved very valuable.

Notes and Comment.

THE EIGHTY-EIGHTH ANNUAL MEETING.—Association city for 1932 is Philadelphia, a city so rich in psychiatric history on this continent that it enjoys a distinction genuinely unique. Near this city, the place of his future work in medicine, was born Benjamin Rush, "the father of psychological medicine in America," whose likeness graces the seal of The American Psychiatric Association and whose "Diseases of the Mind" (1812) was the first treatise on psychiatry to appear in this country.* Philadelphia is the city of Kirkbride, and Chapin, and Weir Mitchell, and Chase, and Mills, and Dercum, and numerous others who have made important contributions to the science of psychiatry, not to mention the distinguished living contemporaries who are worthily perpetuating the honored traditions.

It was in Philadelphia on the 15th of October, 1844, that upon the invitation of Dr. Kirkbride the "original thirteen" assembled at his house and laid the plans of organization—confirmed the following day at a formal meeting held at "Jones' Hotel"—of the Association of Medical Superintendents of American Institutions for the Insane, which in 1892 became the American Medico-Psychological Association, and in 1921 The American Psychiatric Association.

* It is of interest that Byberry township, the place of Rush's birth, now a part of Philadelphia, is the site of the comparatively new Philadelphia Hospital for Mental Diseases, which takes the place of the old Department for Mental Disorders of the Philadelphia Hospital commonly known as Blockley. The Association has met at Philadelphia nine times, including the first assemblage in 1844. At the meetings in 1850, 1860, and once since, at least, it passed resolutions condemning conditions at the old institution. In 1885 when a fire destroyed part of the building devoted to mental disorders with some loss of life the city authorities were strongly urged by Dr. John B. Chapin to build a modern hospital in the suburbs, retaining space in the hospital at 34th Street for reception wards. Nothing was done, however, and until five or six years ago the same unsanitary, overcrowded conditions were permitted to continue, conditions which for years have been a blot upon the fame of the city.

Nearly a hundred years before the birth of the Association there was provided for the first time in the United States at the Pennsylvania Hospital in Philadelphia * actual hospital accommodation for mental patients, in contradistinction to the shelter of almshouses or other places of refuge. It is noteworthy that the citizens interested in the founding of the Pennsylvania Hospital, in their desire to provide proper care for all the indigent sick, made no discrimination between ailments of the body and of the mind. Indeed in their petition to the "House of Representatives of the Province of Pennsylvania" they put foremost the needs of those who were "distempered in mind and deprived of their rational faculties." When the Pennsylvania Hospital opened its doors in 1752 mental cases were among the first received, and here under the kindly guidance of Benjamin Rush was fostered the spirit not only of humanitarian care but also of therapeutic endeavor.†

It is doubtless true that the early handling of mental patients at this institution went little further than custodial care under as comfortable conditions as possible; but when one remembers the rigors to which persons deranged in mind were subjected in those days in all parts of the world, the methods followed at Pennsylvania Hospital were unquestionably benevolent and progressive.

The point of chief interest is that in this first step to provide properly for these unfortunates they were looked upon as sick persons, and no impediment was recognized in treating them in a hospital where cases of physical diseases and injuries were also dealt with.

The state hospital for the exclusive care of the insane was the next step; and while it has been through the agency of the state hospitals which gradually spread over the continent that the remarkable progress in psychiatry to date has been possible, these institutions have been at an inevitable disadvantage in that they served

* The first hospital in North America, the Hotel Dieu at Quebec, founded in 1639, likewise received patients suffering from both physical and mental disabilities.

† While the Pennsylvania Hospital was the earliest in which mental cases were housed and cared for, to Virginia belongs the honor of providing the first state hospital used exclusively for the insane. This institution, now the Eastern State Hospital at Williamsburg, opened for the reception of patients in 1773.

to establish and to perpetuate a line of demarkation between mental and physical illness. This distinction has worked unfavorably for both psychiatry and general medicine; and it is only recently, after the lapse of more than a century and a half that we are reviving the original practice at the Pennsylvania Hospital of housing psychiatric cases in general hospitals.

The 1932 meeting will be the tenth to be held in the city of Philadelphia. In 1894 the semi-centennial of the Association was celebrated in that city. It is safe to foretell that 12 years hence the centennial meeting will also take place in Philadelphia.

In view alike of its historic significance for psychiatry and of the great variety of activities in this field presently being carried forward, it seemed worth while, for the better orientation of visiting members of the Association, to present a statement of the several organizations and institutions concerned and of their respective functions. Dr. H. D. Palmer of the Institute of the Pennsylvania Hospital very kindly undertook to assemble this information which is set forth elsewhere in the present issue of the JOURNAL.

Association and Hospital Notes and News.

THE AMERICAN MEDICAL ASSOCIATION STUDIES MENTAL HOSPITAL FACILITIES.—We understand that the Council on Medical Education and Hospitals of the American Medical Association is making considerable progress in its visitation and study of the psychiatric hospitals, and a preliminary report was made at the Congress in Chicago in February. This undertaking is an independent project of the American Medical Association and is not, as many seem to assume, a joint study in collaboration with The American Psychiatric Association. Many psychiatrists are, of course, members of both organizations.

TENTH INTERNATIONAL CONGRESS OF PSYCHOLOGY.—The National Committee has issued the following preliminary announcement:

In accordance with the resolution at the IX. International Congress of Psychology in New Haven, U. S. A., 1929, the X. International Congress of Psychology will take place in Copenhagen, from Monday 22d August to Saturday 27th August, 1932. H. M. The King of Denmark has consented to overtake the protectorate.

Psychologists and men of kindred sciences can participate as active members of the Congress. In addition, other persons interested can be admitted to some of the meetings as passive members.

The fee for active members is French Frcs. 150 and for their ladies Frcs. 60. The fee for passive members is Frcs. 60.

The official languages at the Congress will be: English, French, German and Italian.

The Congress will be divided into sections, according to the number and character of the papers to be read. Besides, it is intended to arrange some common symposia with lecturers specially invited.

During the Congress social gatherings will be arranged for the active members and their ladies, and there will be given an opportunity of seeing Copenhagen under capable guidance.

Reservation of accomodation during the Congress has been undertaken by The American Express Company.

In connection with the Congress, tours to Psychological Institutions in neighbor countries have been planned. The Committee of the Congress has

been informed that Professor Katz (Rostock), from the "Deutsche Gesellschaft für Psychologie," will be in charge with tours to German and Austrian Institutes. Professor Katz will be pleased to supply any information on application.

For the National Committee:
EDGAR RUBIN.

AMERICAN COLLEGE OF PHYSICIANS TO AWARD PRIZE TO DR. O. T. AVERY.—The American College of Physicians recently selected Dr. O. T. Avery of the hospital of the Rockefeller Institute of New York City as the recipient of the John Phillips Memorial Prize for 1932.

This prize, an annual award by the college in the sum of $1500.00, is given to perpetuate in the college the memory of Dr. John Phillips of Cleveland, a man of outstanding accomplishments as investigator, teacher and physician, for many years a member of the Board of Regents of the American College of Physicians, who gave his life in saving others on the occasion of the Cleveland Clinic disaster on May 15, 1929.

The committee of the John Phillips Memorial Prize, through its chairman, Dr. James H. Means of Boston, recommends the award, "To Dr. O. T. Avery for the series of studies upon the pneumococcus in which he has played a leading rôle, beginning with the discovery of the type-specific soluble capsular polysacchrides and culminating in the discovery of a bacterium producing an enzyme which splits the polysacchrides of Type 3 Pneumococcus *in vitro*, thus rendering it susceptible to phagocytosis and thereby protecting the animals infected with it."

The sixteenth annual clinic session of the college will be held in San Francisco during the week of April 4, 1932. Dr. Avery will deliver an address, "The Rôle of Specific Carbohydrates in Pneumococcus Infection and Immunity," at the convocation on Wednesday evening, April 6. At the conclusion of Dr. Avery's address, the prize will be presented to him by Dr. S. Marx White of Minneapolis, president of the college.

The distinction of this award is enhanced by the fact that although it was available the previous year, it was not possible to decide on a suitable recipient. This is, therefore, the first award made. It is the hope of the officers and members of the college that this annual prize in memory of a distinguished colleague may,

by recognizing merit, be a continuing stimulus to investigators in those subjects having a direct bearing on the advancement of clinical science.

SUPPLEMENTARY LIST OF APPLICANTS FOR MEMBERSHIP AND FELLOWSHIP, AMERICAN PSYCHIATRIC ASSOCIATION:

MEMBERS.

Coyne H. Campbell, Western Oklahoma Hospital, Supply, Okla.
William Worcester Elgin, Sheppard and Enoch Pratt Hospital, Towson, Md.
Clayton J. Ettinger, Kalamazoo State Hospital, Kalamazoo, Mich.
Millard H. Foster, 23 E. Ohio St., Indianapolis, Ind.
Roy W. Goshorn, Allentown State Hospital, Allentown, Pa.
James Davidson Grieve, Toronto Psychiatric Hospital, Toronto, Ont.
Robert Battaile Hiden, Stockbridge, Mass.
McLean Houze, Toronto Psychiatric Hospital, Toronto, Ont.
Louis S. London, 57 W. 57 St., New York, N. Y.
Robert A. Matthews, Philadelphia Hospital for Mental Diseases, Byberry, Philadelphia, Pa.
Matthew Molitch, N. J. State Home for Boys, Jamesburg, N. J.
Harry Merrill Murdock, The Sheppard and Enoch Pratt Hospital, Towson, Maryland.
Thomas Douglas Noble, Sheppard & Enoch Pratt Hosp., Baltimore, Md.
Blake Daniels Prescott, Hartford Retreat, Hartford, Conn.
Bernard Solomon Robbins, Sheppard and Enoch Pratt Hosp., Baltimore, Md.
Max Rossman, Allentown State Hospital, Allentown, Pa.
Charles G. Stogdill, Dept. of Public Health, Toronto, Ont., Canada.
J. B. Spradley, N. J. State Hospital, Trenton, N. J.
Dan Taylor, Western Oklahoma Hospital, Supply, Okla.
Claude Uhler, State Dept. of Mental Hygiene, Delaware.
Norman Livingston Walker, Toronto Psychiatric Hospital, Toronto, Ont.
Frank F. Williams, Jr., Patton State Hospital Patton, Calif.

FELLOWS.

John P. S. Cathcart, 494 Driveway, Ottawa, Ont., Canada.
Clark B. Holbrook, Ivaymarth, Pa.
Edward Cornelius Ruge, Sedro Woolley, Wash.

The Membership Committee would be glad to receive comments from the membership regarding these applicants, and members wishing to send such comments should direct them to the Secretary, Dr. Clarence O. Cheney, 722 W. 168th St., New York, N. Y.

DIRECTORY OF PSYCHIATRIC SERVICES.—The National Committee for Mental Hygiene announces the publication of a unique directory which will prove of great value to all workers in the field of psychiatry and mental hygiene. This directory which is compiled by the Commonwealth Fund will be as complete an inventory as possible "of public psychiatric facilities extant in the

United States, institutional, clinical and otherwise." It will include the names and addresses of the various state institutions for the treatment of mental disease, mental deficiency and epilepsy; the locations of mental hygiene and child guidance clinics throughout the country, the names of psychiatrists conducting them, the type of service offered and the auspices under which the clinics operate; a descriptive account of mental hygiene activities carried on in both federal and state government departments, or by other institutions or agencies in the several states; and finally, the names, addresses and chief activities of all state and local mental hygiene societies.

The amazing development of mental hygiene within recent years makes the appearance of this directory particularly opportune. Probably the most striking feature has been the growth of mental hygiene and child guidance clinics. The committee reports that there are today "some 674 clinics which provide a regular mental health service to the public in 34 states, most of these having come into existence since 1922, when the National Committee for Mental Hygiene and the Commonwealth Fund first joined forces in the development of organized child guidance work." An idea of the scope of this particular service can be gained from the fact that during the past year more than 50,000 children showing behavior disorders and presenting mental problems of all kinds were examined and treated in the clinics. During the same time some 36,000 adults applied to the clinics for assistance in their own mental difficulties. A psychiatric out-patient service of this magnitude, and increasing year by year, cannot fail to be effective in reducing the number of admissions to mental hospitals. It is prophylaxis of a most encouraging kind.

Abstracts and Extracts.

The Clerembault-Kandinsky Symptom Complex. A. A. PERELMAN. (*Journal of Neuropathology and Psychiatry, 1: 3: 44, 1931. Moscow, U. S. S. R.*)

Baillarger, discussing hallucinations, noted that some of them lack a true sensory component, and called such hallucinations incomplete or psychic hallucinations. Kandinsky, in Russia, called them pseudo-hallucinations. In 1920, de Clerembault studied these hallucinations very intensively and came to the conclusion that they were evidences of what he called "automatisme mental." Later on, he described them under the symbolic "Syndrome S." He and his pupils established a theory that all such hallucinations were evidences of a pathological automatism. There is a triad of manifestations consisting of sensory, higher psychic, and motor symptoms. The automatism expresses itself in the fact that the patient does not accept the various sensory experiences as arising within him, but ascribes them to influence from without. The patient feels that the ideas which he has, were suggested by somebody else, and that the strange thoughts were put into his mind by an outside power. The patient states that the psychic life is not his, and that it is controlled by an outside power. Clerembault and his school maintain that this syndrome may be associated with any clinical picture. It may be found in functional states as well as in toxemias, infections and traumas. The author reports two fairly typical histories of schizophrenic patients who felt that somebody was putting various thoughts in their heads and controlled their behavior, at the same time, feeling that the voices which they heard were not real voices but thoughts.

The author points out that the perception of "I" or the "ego" is affected in these cases. The patients complain, very often, that the voices which they hear are obsessive thoughts, and beg to be relieved of them. There is usually no insight present. Claude explains this phenomenon on the basis of the fact that the patient gives a delusional interpretation to the thoughts arising within him, thus complicating the clinical picture. The author stresses the fact that one must differentiate between the primary pathogenetic symptoms and secondary pathoplastic symptoms uniting with the primary. The pathogenetic symptoms are due to the formal organic involvement of the personality, as a result of which the patient dissociates his own sensations and feelings. The pathoplastic symptoms supply the specific content of the delusions and hallucinations. Personality is largely a synthesis of a large number of factors, and involvement of any one of these may give rise to a dissociation affecting the whole individual.

KASANIN.

Book Reviews.

The Criminal, the Judge and the Public. By FRANZ ALEXANDER, M. D., and HUGO STAUB, Attorney at Law; translated by GREGORY ZILBOORG, M. D. (*New York:* The Macmillan Co., 1931.)

This book is of great interest because it is the pioneer contribution to a subject of great importance and complexity. Due to its position as a pioneer, it has many of the faults which stigmatize some of the earlier psychoanalytic publications. It seeks frequently to justify itself and appears to actively propagandize for the whole field of psychoanalysis and particularly for the specific tenets which its senior author holds. The use of such a phrase as "the platitudinous intelligence tests" and such a statement as "the attempt of Lombroso and his school to draw a sharp line between the normal and the criminal comes from the narcissistic wish of the scientist to separate himself and his normal fellow men from the criminal" and the note that a prominent German medico-legal expert, when recently testifying, "forgot his previous testimony which he disowned even when definitely faced with it" and the comment that "it does not surprise us" seem unforutnate.

With two of the major theses in the book, that the present state of medico-legal psychiatry is deplorable and that the unconscious deserves far greater recognition in the law courts, the reviewer is in complete agreement. However the authors' belief, that most of the abnormal behavior of criminals will readily fit the existing behavior patterns which have been drawn by the Freudians, is open to doubt. Much of the content of the volume is devoted to stressing the self-punishment motivation of criminal behavior. The authors reach the logical conclusion when this motivation has been once accepted that in many cases punishment by the law acts as a psychological inciting rather than deterring principle. The reviewer feels that the authors have developed a logical brief for the existence of such cases but he believes from his experience that they are the exception rather than the rule. The authors devote an interesting chapter to "a psychoanalytic table of criminological diagnosis." "The degree to which the ego takes part in the criminality of a given individual" forms the basis for the classification. There is an excellent chapter on the neurotic criminals—a type that is generally labelled "psychopathic personality." The normal, non-neurotic criminal is the individual whose super ego is criminal. "His antisocial acts are totally acceptable to his ego as well as to his super ego." These are the individuals who are reared in a bad social environment and accept its unsocial standards as normal. The authors would have us believe that the number of normal criminals "will be found to be very small." Unquestionably, many "neurotic criminals" mask as normal criminals before the law. I do not see how an indi-

vidual who has had any real experience in the psychiatric study of criminals can believe that normal criminals are in the minority. All of the recent sociological studies in the field of criminology would indicate the tremendous importance of neighborhood standards and neighborhood groups in the genesis of criminality.

This small volume concludes with a psychoanalytic discussion of three cases, two of which were studied by the authors, the third was reported by Marie Bonaparte in the *Revue Francaise Psychonalytique*. The authors' interpretations reveal the amazing fertility of their minds. Many of their deductions impress the critic as equivocal.

In all fairness to the authors it should be stated that they do not look upon psychoanalysis as the cure-all for criminality nor do they look forward to its immediate employment in the courts. They feel that the psychic tension of those who await trial and sentence is not favorable to free association and, in consequence, makes psychoanalytic procedure extremely difficult. The authors feel that most can be accomplished by educating jurists psychoanalytically so that they will be able to pick from the mass of offenders the neurotic criminals and determine for whom punishment would be psychologically helpful and for whom it would be psychologically harmful.

MANFRED S. GUTTMACHER,
Medical Officer, Supreme Court,
City of Baltimore.

In Memoriam.

JOHN ROBERT LORD, C. B. E., M. D., F. R. C. P. E.

Psychiatry in Great Britain has sustained a great loss in the death of Dr. John R. Lord on August 9 last, in London. Dr. Lord was best known to American psychiatrists in his capacity as editor of the *Journal of Mental Science,* published by the Royal Medico-Psychological Association of Great Britain. He had been associated with the journal since the year 1900 when he was appointed assistant editor, and had directed the journal as senior editor since 1914. Through this channel his influence in the psychiatric field has been very extensive. He contributed many important articles to its pages and his editorial notes and reviews were often expanded into essays of much interest and value.

He was also known in America as a member of the organizing committee of the International Committee for Mental Hygiene. He visited this country in May, 1930, when he represented the London County Council and the Royal Medico-Psychological Association of Great Britain, at the first International Congress on Mental Hygiene held at Washington. At this congress he acted as chairman at some of the sessions and took an active interest in the formation of the International Committee. He showed great interest in American psychiatry and was very anxious to place his impressions at the disposal of psychiatrists in Great Britain. On the day following his return to London he submitted a paper at the quarterly meeting at the Royal Medico-Psychological Association showing the possible bearings of American psychiatry on developments in Great Britain. His impression of the International Congress was summarized in a statement which he made concerning the future of the International Committee as follows:

> The establishment of a Permanent International Mental Hygiene Committee marks for all time the recognition by all nations that the highest conception in human relations is the dominance of reason over emotion in the moulding of personality in such a fashion as to bring out the finest traits of human character. There can then come about an understanding

between nations freed from the domination of national pride, prejudice or economic factors and one in which social, moral and spiritual values will have first place. We have been thinking individually and nationally; we have now to learn to think internationally. To bring these international thoughts to bear upon individuals and nations is the mission of the International Committee for Mental Hygiene. Its establishment is thus the commencement of a new era in the progress of humanity.

Born August 14, 1874, Dr. Lord was graduated at the University of Edinburgh in 1896 and joined the staff of the London County Council in 1898 receiving an appointment to the Hanwell Hospital. Quite early in his career he did a great deal to introduce Kraepelin's method of classification and study of mental disorders into Great Britain. He was a strong advocate of the nursing of mental patients by women nurses on the male as well as female wards of mental hospitals. He was appointed medical superintendent of the Horton Mental Hospital, Epsom, London, in 1907. His capacity for administration was very marked and in this hospital he developed excellent laboratory facilities and occupational training workshops. His hospital was noted for research especially on general paresis. From 1915 to 1919 the Horton Hospital was converted into a war hospital for the treatment of general cases, having 2500 beds. Lieutenant-Colonel Lord was the officer commanding and his work was recognized after the termination of the war when he was created a commander of the British Empire (Military Division), receiving also a decoration.

He always stressed the value of the mental hospital in the community and was early to recognize the importance of social workers in connection with hospitals. He developed a close relationship between the Horton Mental Hospital and a general hospital, and was himself a lecturer in clinical psychiatry in a teaching school of the University of London. His interests took him into even wider fields. He was a member of the executive committee of the London Child Guidance Clinic, and was also a member of the General Nursing Council of Great Britain. From its earliest days he was honorary secretary of the National Council for Mental Hygiene of Great Britain and followed the progress of this organization and of the mental hygiene societies throughout the world with very great interest.

In 1926, he was elected president of the Royal Medico-Psychological Association. His presidential address, The Clinical Study of

Mental Disorders, was a noteworthy effort. It was issued as a reprint from *The Journal of Mental Science,* making a monograph of several pages and a valuable contribution to the literature of psychiatry. He was largely responsible for the preparation of evidence which was presented to the Royal Commission on Lunacy in Great Britain, and he gave much valuable assistance in connection with the Mental Treatment Act which has done so much to improve the administration of mental hospitals in England.

He never enjoyed good health, but despite his physical disabilities he was a man who displayed wonderful energy and achieved so very much. The profession of medicine, and especially the various societies with which he was connected will be the poorer for his passing.

RALPH A. NOBLE.

The editor has requested me to contribute a few words in addition to Dr. Noble's memorial note, in which he has condensed the salient points of Dr. Lord's career.

I first met Dr. Lord at the meeting of the Royal Medico-Psychological Association at the West Riding Asylum, Wakefield, Yorkshire, in 1928.

I had known him for many years through correspondence upon journalistic matters, and when I found that I was to be able to attend the meeting at Wakefield, one of the things I looked forward to with pleasurable anticipation was the prospect of meeting Dr. Lord, the editor of *The Journal of Mental Science.*

I had known Tuke, Bucknill, and Clouston who had preceded him in the editorial conduct of the journal, and other members of the editorial staff—but I had, I thought, recognized in Lord a man of somewhat different type.

Because of his history as an administrator of a mental hospital and particularly because of his record as the director of a great war hospital, I looked forward to meeting a man of physical vigor, of commanding presence and mental force.

I found, however, an individual of frail physique; but active and efficient in the conduct of affairs and, as I had anticipated, of an alert and well-controlled mind.

I soon learned that he was an invalid, the victim of a serious malady, but no one would have suspected the truth so completely was his invalidism kept in the background.

Early in the meeting it was evident that Colonel Lord was the directing force of the occasion, one might almost say, without any disparagement of the services of the president for 1928-29, Prof. J. Shaw Bolton, that the conduct of the sessions was in Dr. Lord's hands.

The secretary was unavoidably absent, and my first impression was that Dr. Lord was acting in his place, but I soon saw that he was doing things far beyond the duties of a secretary.

He was clearly a most valuable aid to the president and other officials, but at the same time an unobtrusive one.

He introduced the foreign guests, and in the case of those to be presented for honorary or corresponding membership gave an illuminating sketch of the career of each. He even quietly intimated the time which might be consumed by those who brought to their British confréres, the greetings of the various kindred societies which they represented. He presented sundry reports and took an active part in the discussion of committee reports and of papers which were read.

In May, 1930, as Dr. Noble has stated, Dr. Lord was in attendance at the meeting of the first International Congress for Mental Hygiene in Washington.

I saw at once that he had failed in vigor in the two years which had elapsed since I saw him in England, but he did not appear to spare himself in any way. He was a prompt and regular attendant at all the sessions, and was present at several of the social functions, notwithstanding the exhausting effects of the great heat. At one of these, a lunch given to the editors of foreign journals of psychiatry and neurology present at the congress, by the editorial staff of this JOURNAL, Dr. Lord made a very felicitous speech.

He told me just before sailing for home that he hoped to return in the fall to make a study of some of our mental hospitals and to visit the western coast.

In March, 1931, he was married to Dr. Ruby Thornton Carr, a member of the medical staff at Horton.

The memorial notice in the October, 1931, *Journal of Mental Science* says: "It was with real gladness that his closest friends

welcomed the marriage of affection which it seemed would bring a new delight and interest to his maturer life. But a few months of happiness was all that was granted to him, and the sympathy of all who knew him goes out to his widow in the very sad circumstances of her bereavement."

In this expression of sympathy I join with heartfelt sincerity, as will, I am sure, all the readers of this JOURNAL.

E. N. B.